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Macworld

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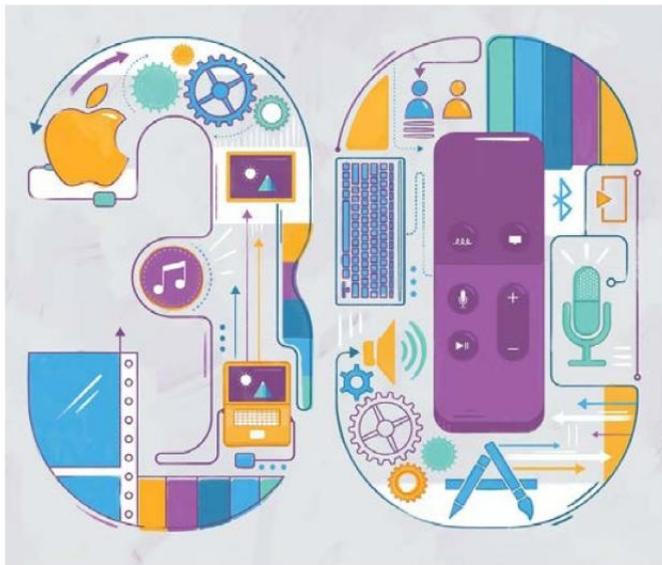
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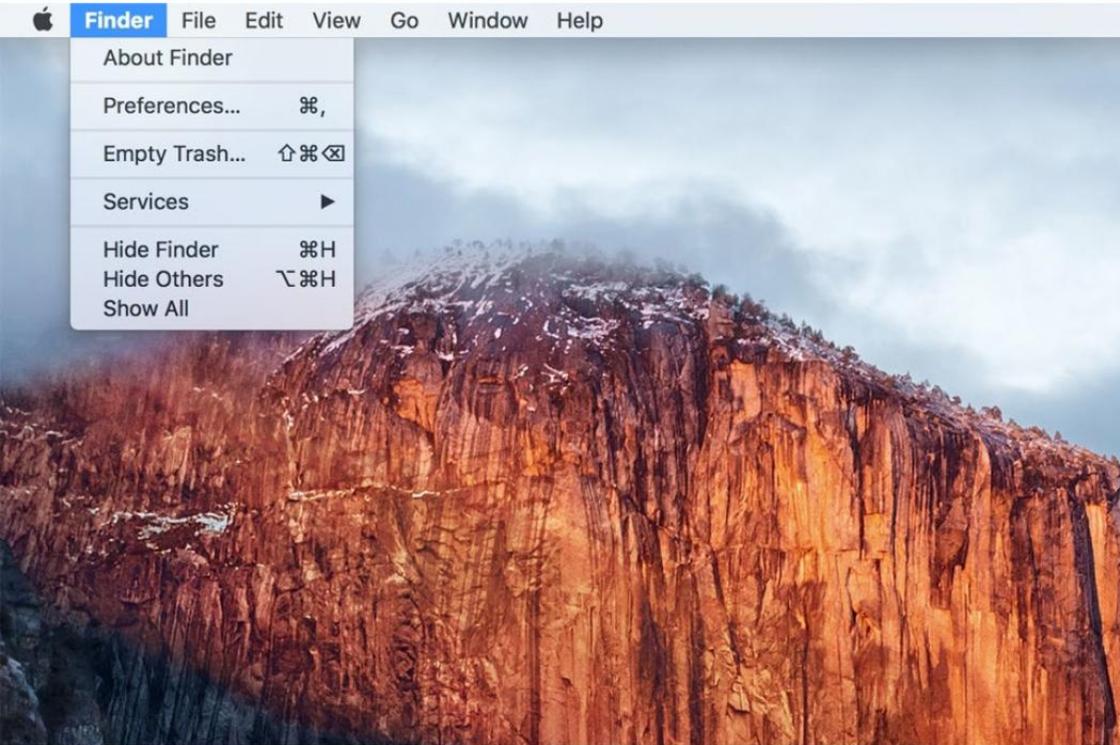
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The power of OS X's menu bar

It's always there and it's often overlooked, but the menu bar is a very useful part of the Mac operating system.

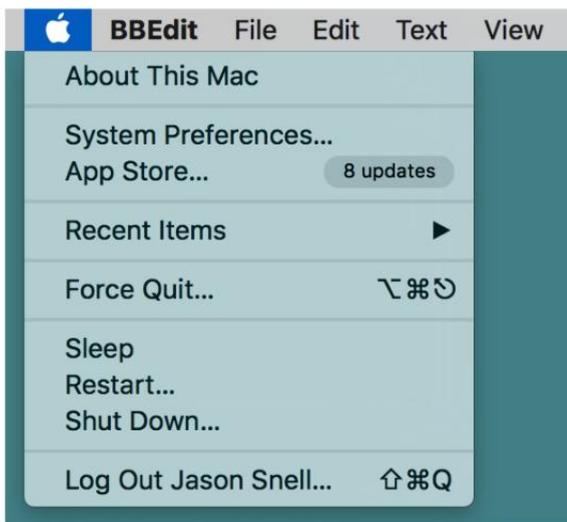
BY JASON SNELL

The menu bar at the top of your computer screen has been with the Mac since the beginning. It's one of the defining characteristics of the Mac, one that even Microsoft didn't dare duplicate—in Windows, the menu bars go on the top of windows, not at the top of the screen. The Mac menu bar is a constant, a north star.

Except...things have been getting a little weird lately. Last year, Apple added an Automatically Hide And Show The Menu Bar feature to the General pane of System Preferences. When that preference is selected—or when you're in full-screen mode—the menu bar appears only when you move your mouse to the top of the screen. It feels spectacularly wrong to me, but then, I've been using a Mac since George Bush was President. (The first one.)

Apple also recently added a new Use Dark Menu Bar And Dock mode, which flips the normally black-on-white menu bar into a design only Darth Vader could love: white text on a black background. It's not my cup of tea, and flipping that setting doesn't change the style of any of the other black-on-white windows on my Mac's screen, but if you like it, more power to you.

Even as someone who has committed plenty of keyboard shortcuts to memory, I find the menu bar incredibly valuable. And while it's almost always in the faces of every



Mac user, it's too often ignored. The menu bar, like the Utilities folder (go.macworld.com/utilitiesfolder), is a place that makes you a more efficient and informed Mac user.

THE APPLE MENU in OS X El Capitan.

THE MENUS THEMSELVES

Another uniquely Mac touch that has been with us since 1984 is the Apple logo in the top left corner of the screen. Back in the classic Mac OS days, this was originally the home for

tiny apps called Desk Accessories, and System 7 transformed it into a menu you could customize by dropping any item in the Apple Menu Items folder inside the System Folder. When OS X arrived, Apple almost eliminated the Apple menu in the OS X Public Beta, but ultimately shipped OS X 10.0 with more or less the same version of the Apple menu today.

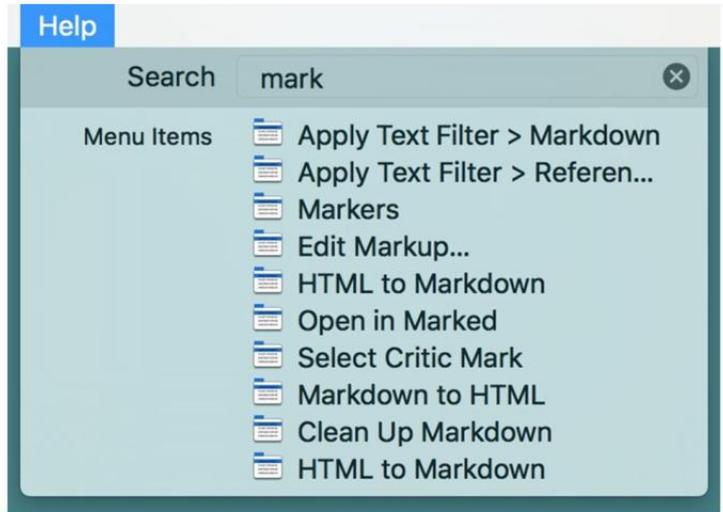
Today's Apple menu is a repository for all the stuff that Apple wants to give you quick access to, but that isn't specifically related to the frontmost application. It gives you quick access to the System Preferences and App Store apps, a list of recently opened apps and documents in a submenu, and access to the Force Quit window. But perhaps most important is its integration of all the system power features which lived under the Special menu in the old days of Mac OS: Sleep, Restart, and Shut Down.

As with so many things involving the menu bar, holding down the Option key will reveal a bunch of alternate options. If you want to restart or shut down without being

asked if you're sure, hold down the Option key while selecting those items. If you're trying to launch the System Information app without seeing the About This Mac window, the same method will get you there.

Next to the Apple menu is the Application menu, though it's not labeled as such—this is the menu that displays the name of whatever the frontmost application is. Most of the menu items here are controlled by the application itself, but there are a few interesting window-management tools here, allowing you to hide the current app, hide all apps except the current app, or show everything that was previously hidden.

More notable is that this is where the Services submenu lives. If you



THE HELP MENU has a search function that can be used to find a particular command.

create scripts using Apple's included Automator utility, this is where they appear. The Services menu is divided in two: workflows that are available anywhere, anytime, and workflows that are particular to the app you're currently using.

At the far end of an application's menus is the Help menu, and if you fancy yourself a power user, you may have never used this menu. The Help menu is usually a place to view documentation, open web resources, or report a bug. But I use the help menu all the time, because of the powerful search function built into it. From the top of the Help menu, you can search the contents of every menu of the currently open app. When I'm using a complicated app like Numbers or BBEdit or Logic Pro, sometimes I can't remember where to find a particular command. And I don't need to know: I just type a word from the menu item and move my mouse over the right result. That menu item will activate and a big arrow will point right at it. You know, for education. You can also just click on the result to activate that command as if you had known where it was all along.

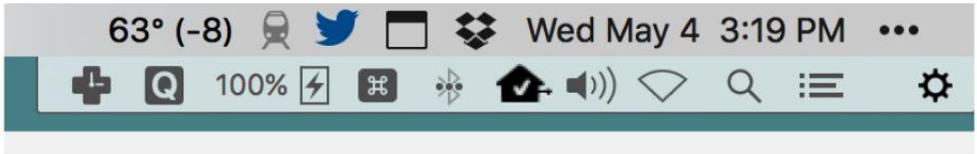
OTHER ITEMS IN THE MENU BAR

At the far right of the screen are a collection of icons supplied by Apple that give you quick access to information and other features of your Mac. Exactly which items you see will depend on what kind of Mac you're using (if it's a laptop, you'll see the battery menu-bar item) and how it's configured.

Many, but not all, of these items can be reordered by holding down the Command key and clicking and dragging the icons in question. If you don't want to see one of them



SOUND OPTIONS FROM
the menu bar.



any more, you can hold down Command and drag the icon out of the menu bar entirely. (Alas, the Spotlight and Notification Center icons at the far right of the menu bar are impervious to this sort of trickery.)

It's obvious how to use these menu-bar items—you either look at them to garner information (like how much battery you have left, or what time it is) or you click on them to reveal a menu with more information or commands. But if you hold down the Option key before you click on a menu-bar icon, you may discover that some seemingly simplistic items have unexpected depths.

Take the Sound menu-bar item, for example. It couldn't be simpler—it's just a volume slider. But if you Option-click on it, you'll discover that you can quickly set new system input and output devices. Hold down the Option key and click on the Wi-Fi item, and you'll get detailed information about your network interface, the status of the Wi-Fi base station you're connected to, and extended information about any of the other Wi-Fi sources your Mac can see. (To do that, just move

your cursor over one of the other sources and wait a second for the pop-up message to appear.)

ITEMS NOT FROM APPLE

If you've installed apps beyond what Apple provides, you may discover that some of them add icons to the menu bar as well. Dropbox lives in my menu bar and provides feedback when it's syncing files, and I can click on it to quickly see what's been added to my Dropbox recently. Online backup tools generally put a status item in the menu bar, providing quick access to your backup tools.

In addition to Dropbox, three of the other items I've come to rely on in my menu bar are:

- Fantastical 2 (go.macworld.com/fantastical2osxrev), which lets me glance at my forthcoming schedule and quickly create new calendar events simply by typing.
- TripMode (go.macworld.com/tripmoderev), a utility that lets me control what apps get to send data over my network connection. I use this on my

BARTENDER

MacBook Air when I'm tethering to my iPhone, so it doesn't destroy my data allowance with stuff like online backup, and on my iMac as a way to ensure that only certain apps are using data when I'm doing a podcast or video conference.

- BitBar (getbitbar.com), a free app that lets you put just about anything you want into the menu bar. I use it to display the current temperature from my backyard weather station, but you can script it to do just about anything, or just download one of the many pre-built plug-ins for it.

ONE ITEM TO RULE THEM ALL

Finally, I have to heartily endorse the \$15 utility Bartender (go.macworld.com/bartenderrev), which gives you unprecedented control over your menu bar. Bartender lets you hide menu-bar items, show others, and relegate others (even Spotlight and Notification Center!) to a submenu, allowing you to de-clutter the menu bar.

I love the control that Bartender gives me over my menu bar. Just as the menu bar is one of the defining features of the Mac, so is personalization. There are many menu bars out there, but this one is *mine*. ■

5 travel backpacks designed to carry your MacBook

It's the start of summer travel season, and you don't have to leave your laptop behind.

BY OSCAR RAYMUNDO





In April, Apple updated the MacBook, making its already-ultraportable laptop faster and giving it a longer-lasting battery. These improvements certainly made the MacBook even more ideal for travelers and people who are always on the go. Still sporting just one USB-C port, the new MacBook was built for a truly wireless world, according to Apple, so you won't be bogged down by superfluous wiring.

STANDARD LUGGAGE CO.'S Carry-On Backpack

With that travel-friendly mindset, we went on the hunt for the perfect backpack for taking your MacBook with you on all your summer adventures. Some of these backpacks are big enough to fit even a 17-inch MacBook Pro, but small enough to still be considered a carry-on should you happen to be boarding a plane to a far-off destination. Here are five of our favorite backpacks for bringing your MacBook along for the ride.

STANDARD LUGGAGE CO.'S CARRY-ON BACKPACK

This travel backpack by Standard Luggage Company (standardluggage.com) was intended for all types of travel, whether a weekend getaway or some serious backpacking. You can tuck away the backpack straps and turn it into a duffel bag by holding it from the side handle, or add the shoulder strap and carry it like a messenger bag. The Standard Luggage (go.macworld).



JUST PORTER Sable Rucksack Backpack, in gray

go.macworld.com/stdluggagebackpack) backpack has a clamshell design, so you can open it and lay it out flat when you're packing. In addition, it comes with a separate pocket for storing a 15-inch MacBook Pro. The main compartment can be expanded, too, if you happen to buy more stuff during your travels. This all-in-one bag retails for \$179.

JUST PORTER SABLE RUCKSACK BACKPACK

Just Porter (justporter.org) spent two years designing the Sable Rucksack (go.macworld.com/justportersablerucksack), a waterproof, roll-top backpack which uses a custom

thermoplastic polyurethane fabric to keep your things dry. And you know how you have to take out your laptop every time you go through airport screening? The Sable backpack has a padded laptop compartment with its own separate side-access, so you don't have to dig for your MacBook. It also has quick-release magnetic buckles on the front, just in case you do need to get to the main compartment in a hurry. The Sable Rucksack Backpack is available in gray, black, and olive for \$199 from the Just Porter website or from Amazon for \$200 (go.macworld.com/justportersablerucksackamz). The company also

has instituted a charity program so that for every backpack sold, they send a backpack full of school supplies to a kid in need.

NORTH ST. CLINTON BACKPACK

Another roll-top backpack, this one by Portland-based North St. Bags (northstbags.com), the Clinton backpack is handmade with only heavy-duty materials, including vented foam and fluorescent lining so you can easily spot all your stuff. The Clinton backpack is also perfect for people who are prone to back pain caused from carrying heavy backpacks. The shoulder straps were vetted by a physical therapist, so the backpack won't destroy your back during long trips. You can also customize the inside of the backpack to attach more pockets onto Velcro rows for better organizing your luggage. In addition, you can purchase external upgrades like a waist belt and an extra sleeve pocket. The 34-liter Clinton (go.macworld.com/northstbagsclinton) backpack is \$199, and the 20-liter model is \$169 directly from North St. Bags.

INCASE EO TRAVEL BACKPACK

Incase (incase.com) is known for making stylish, top-notch accessories for all our Apple gear, so it's no surprise that their travel backpack is also worth a serious look. The Incase EO Travel Backpack stores up to a 17-inch MacBook Pro in a





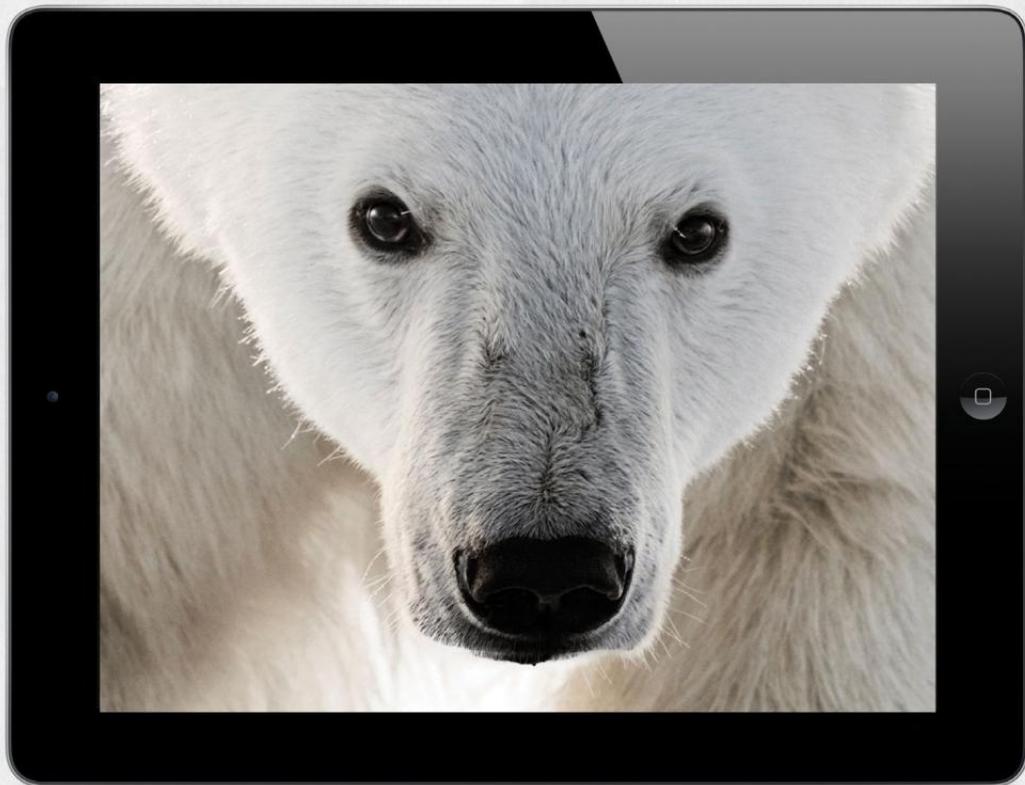
separate sleeve so you can get to it quickly without having to shuffle all your other stuff around. And it can fit a lot of stuff, as the main compartment expands by 35 percent. You can get the EO Travel Backpack ([go. macworld.com/eotravelbackpack](http://go.macworld.com/eotravelbackpack)) in black for \$180 or in heather gray for \$220 on the Incase website. The black version is also available on Amazon for \$122.24 and the heather gray is currently selling for \$146.60.

AER DUFFEL PACK

Is it a duffel bag? Is it a backpack? It's a Duffel Pack. San Francisco–based Aer (aersf.com) has designed a carry-on

backpack that balances “smart functionality with a clean, architectural aesthetic.” Unlike most backpacks, the Duffel Pack has a zipper down the middle of the main compartment. It's also perfect for carrying both your “mobile office” and your workout gear with a ventilated shoe compartment and an expandable side pocket for storing your water bottle. For your tech gear, the Duffel Pack has a padded laptop compartment that fits up to a 15-inch Macbook Pro. In addition, it also has a second padded pocket for your iPad. The Duffel Pack (aersf.com/duffel-pack) is available on Aer's website for \$150. ■

AER DUFFEL PACK



THE CLOSER WE GET, THE MORE WE SEE



Experience the world's most amazing animals in one app. **WWF TOGETHER** – the new free app from World Wildlife Fund. Download it today.

worldwildlife.org/together



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Remember when you first started using a web browser, how great it was to be able to save bookmarks? It was necessary back in the day, because you couldn't remember all those URLs, and browsers didn't auto-complete with addresses of your saved sites. They also didn't suggest sites when you typed the name of a company or publication, so you needed to know the URL to get where you wanted.

But the more bookmarks you save, the harder it is to find what you're looking for. Remember that site where you saw that really interesting article last month? You bookmarked it, and you remember the title, but if you look in your Safari bookmarks, you have to either scan the entire list, or search for it. Sure, you can sort bookmarks in folders, but who has the time to do that? And you'd only do that for the sites you visit very often.

Wouldn't it be great if you could sort bookmarks alphabetically in Safari? There has never been a way to do this in Safari itself, but there is a

way, one that's been around for donkey's years (go.macworld.com/safarisort). The process is slightly different now.

Start by displaying your bookmarks in Safari (Bookmarks → Show Bookmarks). Click the Edit button at the bottom of the list.

Drag them all to a folder in the Finder; make sure you don't select Bookmarks Menu, or you won't be able to drag the bookmarks. Display that folder in List view (View → As List, in the Finder), and then click the Name header to sort the files by name.

EDIT YOUR SAFARI
bookmarks to be able to drag them to the Finder.

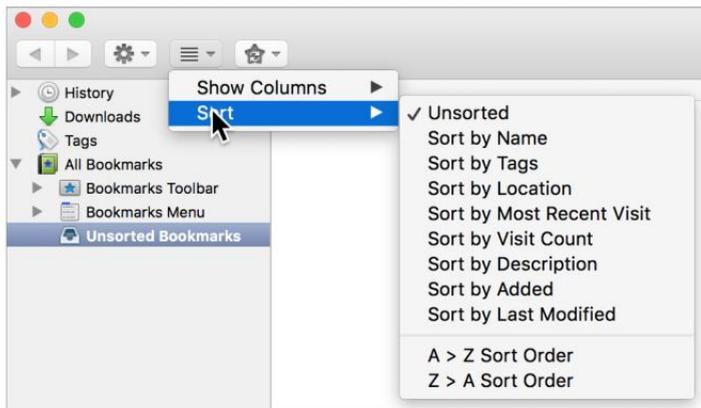
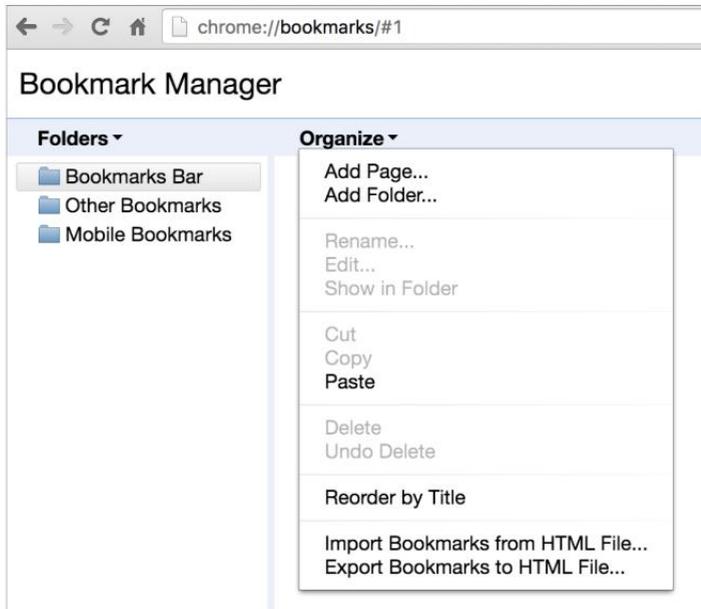
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Next, move up a level in the Finder (press Command-up-arrow), and drag that folder onto the bookmark list in Safari. All your bookmarks will be added to the Bookmarks list, in that folder. You can delete the originals, then move the bookmarks out of the folder to the Bookmarks Menu, or to your Favorites. This is a lot of work for something that should be pretty simple.

You can do this easily in other browsers. For example, in Chrome, if you display your bookmarks and click the Organize menu, you can easily sort them alphabetically (Reorder By Title).

And Firefox gives you a plethora of sort options.

Fortunately, there's an app for this: the free SafariSort (safariisort.com), which can sort your bookmarks alphabetically, or in



TOP: Chrome lets you sort bookmarks alphabetically. **BOTTOM:** Firefox gives you lots of sort options for your bookmarks.



SAFARISORT is a simple app that sorts your bookmarks alphabetically.

alphabetical order with all your bookmark folders on top of the list. It's fast and simple, and if you like having bookmarks in order, you can run it regularly.

Wanting to sort bookmarks alphabetically doesn't seem like an odd feature request; it's actually a great way to cull duplicate bookmarks. In fact, Apple should allow Safari to

display bookmarks in date order as well. If you add bookmarks to folders, you won't see all your bookmarks by date, and having a full list in order can be a good way to find what you're looking for.

No matter what, it would be nice if Safari offered some more ways to view bookmarks, as other browsers do. ■

Reviews

The Latest Mac Products
Reviewed & Rated



MAC GEMS ARE APPS THAT OFFER STANDOUT UTILITY OR UNIQUE FEATURES AT A GREAT PRICE.



BUSINESS SOFTWARE

FILEMAKER 15: EVOLUTIONARY RELEASE WITH A NEW LICENSING PROGRAM

BY WILLIAM PORTER

WITH VERSION 15, the FileMaker platform (filemaker.com) gets better, and it was pretty good already (go.macworld.com/filemaker-14rev). But in terms of features, FileMaker 15 is an evolutionary rather than revolutionary release. Many existing users may not feel the need to rush to upgrade, and both new and current users may find the new licensing options a bit confusing.

FILEMAKER PRO 15



AT A GLANCE

A powerful and widely used development platform gets better.

PRICE WHEN RATED

\$329 individual license; \$197 upgrade; licensing for teams pricing available

FILEMAKER PRO ADVANCED 15



PRICE WHEN RATED

\$2,664 perpetual license or \$888 annual license for up to five users; licensing available for more users

FILEMAKER GO 15



PRICE WHEN RATED

Free

COMPANY

FileMaker

FILEMAKER GO

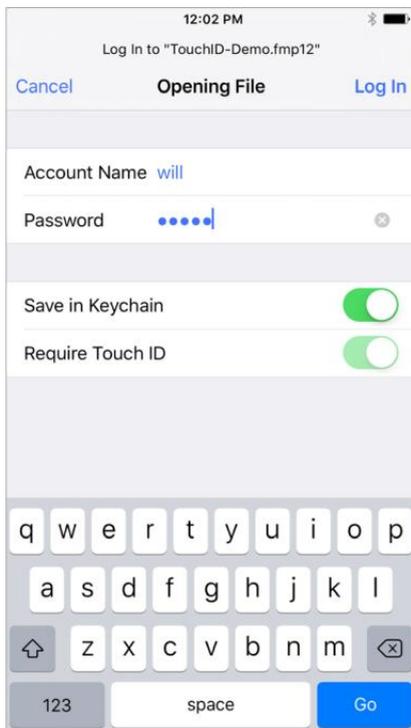
FileMaker Go (free; go.macworld.com/filemakergo) allows iPhone and iPad users to access and run FileMaker custom apps. Go only lets you use the app to access and manipulate its data; you can't create a custom app in Go.

Want to build a relational database from scratch on your iPhone? Check out [Airtable](http://go.macworld.com/airtableev) (go.macworld.com/airtableev). The difference between Airtable and FileMaker is instructive. Airtable is all about managing your data, and at that it does a brilliant job. By contrast, these days, FileMaker isn't just a data-management tool; in fact, for a growing number of FileMaker developers who are using SQL back ends, FileMaker isn't about managing the data at all. What really sets FileMaker apart is its strong toolset for creating rich user interfaces, or, in a word, apps.

FileMaker custom apps built for iOS are now even "appier." With the iPhone 6s or later, Go 15 supports 3D Touch. On the iPhone 5s and later, you can now log in to apps in FileMaker Go using Touch ID. As with other apps supporting Touch ID (such as a bank app), once you authenticate the old-fashioned way and permit iOS to store your credentials in Keychain, subsequent logins can be done via Touch ID, which is definitely easier and arguably more secure than typing a weak password on your iPhone. FileMaker Go 15 also supports app extensions that will make interaction with many other apps on your iOS device easier.

FileMaker Go 15's other novelty is support for iBeacons (go.macworld.com/filemakerproibeacons). A FileMaker 15 database can be designed to capture iBeacon signals from one or more beacons within a defined distance from the iPhone; the beacon location data can then be analyzed so users can be told what they're close to.

I confess that I had never heard of iBeacons before, but despite being late to this party, I found it quite easy to set up a FileMaker Pro custom app to capture an iBeacon signal and convert it into useful info. If you're using FileMaker technology, say, to manage inventory in a large ware-



FILEMAKER GO 15 allows you to save your login to the iOS Keychain, so next time you can get in using Touch ID instead of having to type your name and password.

house, you may want to take advantage of this right away. And in six months or a year, you may find museums and public gardens using FileMaker databases capturing iBeacon signals to provide guided tours.

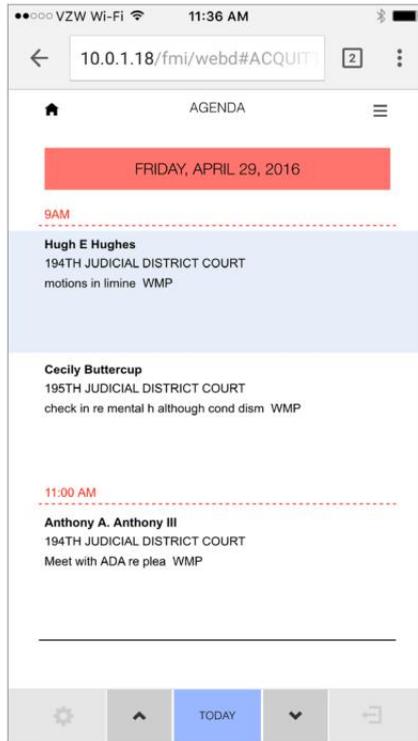
FILEMAKER FOR ANDROID?

A few versions ago FileMaker introduced WebDirect, a technology that allows users to access FileMaker databases in a web browser. Until now, WebDirect worked only on your desktop computer. And since FileMaker Go works only in iOS, that meant that there was no way to access a FileMaker database from an Android device. Well, on a smartphone or tablet running the latest version of either iOS or Android, you can now access a properly hosted FileMaker database without having to install FileMaker Go or anything else. Just open the database's web location in the latest versions of Safari or Chrome and you're in.

Making FileMaker apps available to Android users in Chrome is the most exciting thing about the FileMaker 15 release. Mobile browser support is available in iOS, too, but remember, FileMaker Go for iOS is a free download and provides a better experience.

FILEMAKER PRO AND PRO ADVANCED

The old lodestar of the FileMaker firmament, FileMaker Pro (go.macworld.com/filemakerpro), seems to be fading in brightness a bit, as more



LOOK, MA, NO INSTALLATION!
A FileMaker 15 custom app for attorneys, accessed in Google Chrome on an iPhone 6 Plus. Works equally well in Chrome 48 on Android devices.

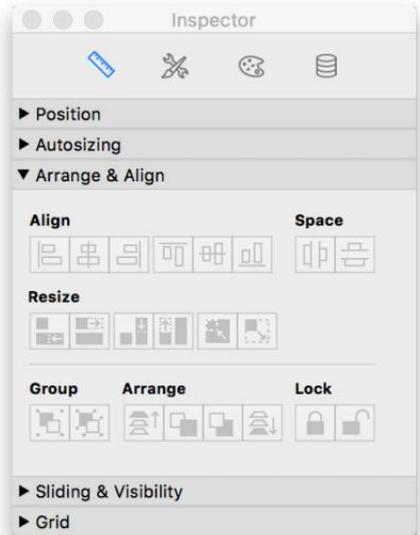
attention is directed to Go and WebDirect. But apps run in Go or your browser still need to be built in Pro, or better, Pro Advanced, and the old programs do get a few tweaks that will matter only to developers: undo finally works in the script editor (yay!); layout inspectors have gotten a cosmetic refresh; etc. And of course, FileMaker Pro and FileMaker Pro Advanced 15 (go.macworld.com/filemakerproadvanced) provide necessary developer support for new features in Go like iBeacons, as well as providing the tools needed to optimize your apps or deployment in Go and/or WebDirect.

The one thing existing users of FileMaker might appreciate is the fact that the platform's file format (.fmp12) has not changed. Of course that just means you can easily open a FileMaker 12, 13, or 14 database in FileMaker Pro 15. It doesn't mean you can go the other direction. In other words, to take advantage of new features in FileMaker 15, you'll need to use FileMaker 15.

SERVER

FileMaker Pro still supports peer-to-peer sharing for a handful of other FileMaker licenses on the same LAN, but hosting your files in FileMaker is incomparably better in every way. Not only can your files be accessed by significantly more users when hosted by FileMaker Server (go.macworld.com/filemakerserver), they will also be more secure, access will be faster, backups will be easier, various processing tasks can be performed by Server, and finally, FileMaker Server is necessary if you wish to access your files remotely in FileMaker Go or WebDirect. Using a FileMaker database without Server to host it is like living in Dallas without a car: You can have a pretty good time, but you won't be going anywhere.

Like FileMaker Pro and Pro Advanced, FileMaker



THE LAYOUT INSPECTORS in FileMaker Pro Advanced 15 (top) and 14 (below).

Server in version 15 gets few headlines and such improvements as it does get will be important mainly to developers and network admins: better logging, improved handling of SSL certificates, and a couple of performance enhancements.

NO 'I' IN TEAMS

On a less technical note, it looks like FileMaker Server is about to become the most important element of any FileMaker installation, not just because it serves databases to remote users, but also because it takes on an expanded role as the controller of FileMaker licensing.

At least for now, you'll still be able to buy individual, perpetual licenses for FileMaker Pro and Server, priced at \$329 for Pro, \$549 for Pro Advanced, and \$1,044 for Server. Volume discounts with annual subscription pricing are also available, and buying in volume can bring the price per user per month of using FileMaker Pro down to \$10 (not including Server) or even lower if you purchase larger bundles of licenses. These are described on FileMaker's website as "legacy licensing" options.

But FileMaker 15 is introducing a new licensing model called "FileMaker for Teams." Basic cost per year is about the same as legacy volume discount subscriptions if you don't need access via Go or WebDirect, and somewhat cheaper if you do. With FileMaker for Teams you're licensing "user connections" rather than people (i.e., users) or apps on devices (i.e., connections), and the licensing will be handled not in the apps but in FileMaker Server. So FileMaker for Teams comes with a somewhat new flavor of FileMaker Pro–styled "FileMaker (for User Connections)." Yes, it's awkward but at least it's unlikely to contribute to acronym pollution. The functionality of FileMaker (for User Connections) is identical to that of the plain old FileMaker Pro, except that FileMaker (for User Connections) is activated only while it's logged in to Server.

I am pretty sure FileMaker Incorporated regards this approach as simpler and in some ways it is. With the bad old approach, you had to calculate the average and maximum number of connections Server

AT LEAST FOR NOW, YOU'LL STILL BE ABLE TO BUY INDIVIDUAL, PERPETUAL LICENSES FOR FILEMAKER PRO AND SERVER, PRICED AT \$329 FOR PRO, \$549 FOR PRO ADVANCED, AND \$1,044 FOR SERVER.

would be hit with at any one time during a typical day. With FileMaker for Teams, you just ask yourself how many users you have and you're done. (Wouldn't it be great if your cellular service provider simply asked you how many phone numbers you need?) The FileMaker for Teams licensing model also more closely resembles the models used in the larger corporate database world, and in that respect, it may make TCO and ROI comparisons easier for decision makers.

Nevertheless, there's going to be some pain involved in this transition. It's unclear how legacy licensees will transition to FileMaker for Teams. Also unclear is how this will impact one of FileMaker's core markets, namely, very small offices with fewer than five users and especially those who may have outsourced the hosting of their databases to one of the several excellent FileMaker hosting services available on the Internet.

BOTTOM LINE

The FileMaker 15 release will matter more to some groups of users than to others. If you're a single user or a very small office just looking to manage your data, you might not need FileMaker at all:

Airtable (go.macworld.com/airtablerev) might be a better fit. If you've been using FileMaker Pro 14 (or earlier) with old-fashioned perpetual licenses, and if you're happy with what you have now, then the case for upgrading to 15 is not compelling.

I'd recommend especially that small-office users currently hosting files through a service like FileMaker Hosting Pros or Point in Space delay upgrading until all the implications of the new licensing terms for FileMaker Server become clear. But if you're already on a subscription plan with FileMaker, and especially if you wish to take advantage of the improvements on mobile devices, I urge you to take advantage of your option to upgrade without delay. ■

IF YOU'RE A SINGLE USER OR A VERY SMALL OFFICE JUST LOOKING TO MANAGE YOUR DATA, YOU MIGHT NOT NEED FILEMAKER AT ALL: AIRTABLE MIGHT BE A BETTER FIT.



UTILITY SOFTWARE

GEMINI 2: FIRST LINE OF DEFENSE AGAINST DUPLICATE FILES ON YOUR MAC

BY J.R. BOOKWALTER

IF YOU'VE BOUGHT a new Mac in recent years, chances are it arrived with flash storage in place of a traditional hard drive. In terms of reliability and rapid-fire boot times, flash storage is awesome, but it's expensive. So to make it more affordable, you don't get the capacity you see with hard drives.

There are a lot of ways to work around the built-in limited flash storage, but there's another method for eking out a little more space: Purge duplicate files. Few of us bother doing it, because weeding out extra copies of photos, documents, and other media simply takes too much time and energy.

GEMINI 2



AT A GLANCE

Gemini 2 identifies duplicate folders, pictures, applications, music files, documents, and videos on your Mac and helps free up space by eliminating them safely.

PROS

- Attractive and easy to use
- Accurately identifies exact duplicates from similar matches
- Works with individual files, folders, or entire libraries (OS X Photos, iTunes)

CONS

- Achievements feature feels out of place
- Smart Cleanup isn't always intelligent
- Double the price of previous version

PRICE

\$20

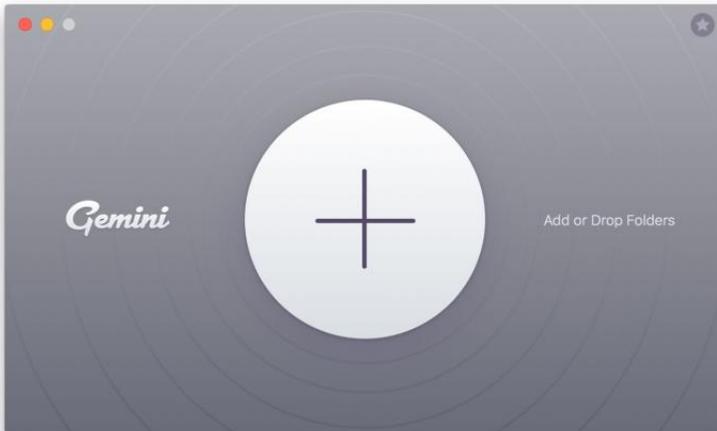
COMPANY

macpaw.com

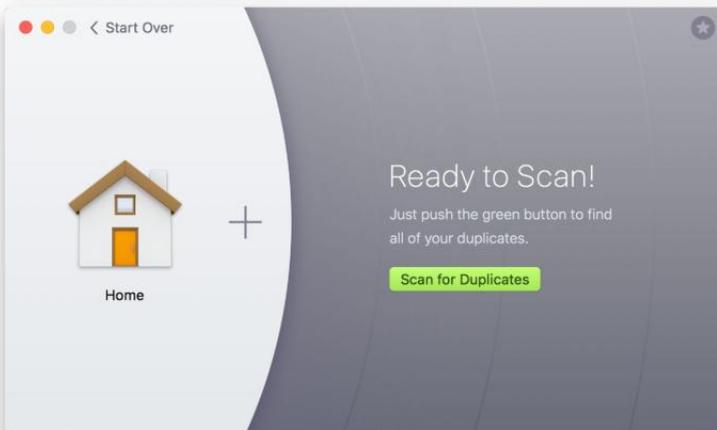
SEEING DOUBLE

With Gemini 2 (\$20; go.macworld.com/gemini2) there's little reason to fear duplicates. It has a polished, intuitive user interface and the brains to differentiate copies from originals by testing them against nearly a dozen different parameters. It's also much faster, especially compared to digging through thousands of files and folders the old-fashioned way.

The software's front end is little more than a large plus button where you add or drop folders you want to examine. Click the green Scan For



GEMINI 2 OFFERS a minimalist user interface for adding or dropping files and folders you want to examine for duplicates.



AFTER ADDING FILES or folders to Gemini 2, starting a scan requires little more than a click.



FOLLOWING A SCAN, Gemini 2 displays how much storage space you might be able to free up, along with a breakdown of content type.

Duplicates button, then sit back as the software builds a map of your folder(s) and identifies files believed to be copies, displaying an estimate of how much space can be reclaimed.

Assuming duplicates are found, a quick breakdown of the results will be displayed. The garish color graphs from the first version have been replaced by an eye-pleasing circular ring that displays the content type as you hover the mouse around it. Users can then review scan results, which expands the window to display content in a grid or list view, sorted as exact duplicates or similar files. Double-clicking a thumbnail allows users to visually compare files side-by-side with relevant data (size, last modification date, path, and dimensions), which works particularly great with photos and videos.

There's also a search field to further limit results to specific queries. Once your selections have been made, duplicate files can be removed by clicking a button in the bottom right corner. By default, files removed by Gemini 2 are first moved to the system Trash as a safeguard, but this behavior can be modified in *Preferences* → *Removal*; files can instead be moved to a specific folder of your choice or permanently deleted with a single click, should you prefer to live dangerously.

WORK SMARTER

In most cases, the summary window also offers a second option called Smart Cleanup, which purges anything automatically selected as an

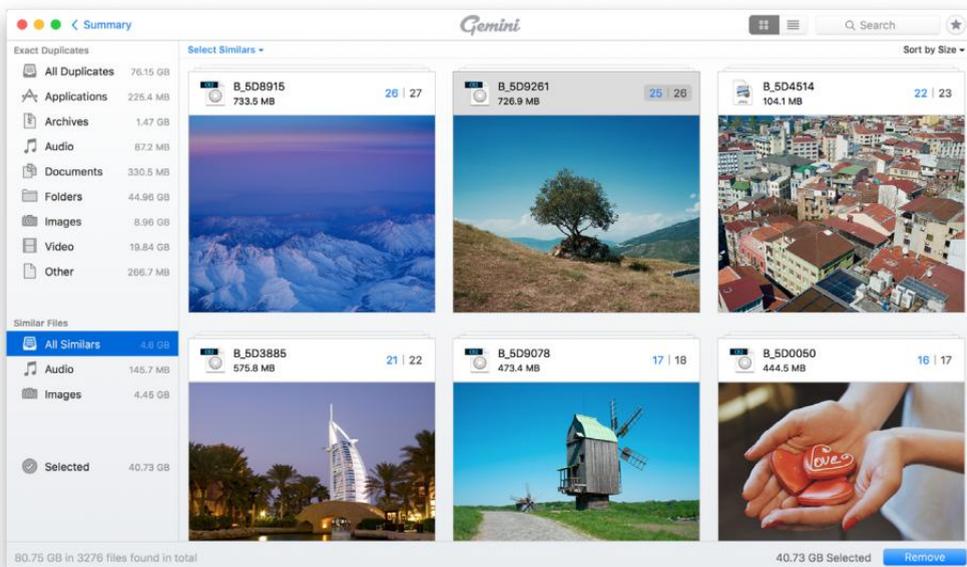
exact duplicate by Gemini 2. This option is faster for casual users, but it was also easy to trip up the software by copying and pasting the same PDF files into a folder several times, which incorrectly reported no duplicates found.

There are a few occasions where Smart Cleanup isn't an option—processing entire OS X Photos or iTunes music libraries, for example. In those cases, you'll want to examine potential duplicates more carefully. However, the software offers yet another safety net, this time moving images or songs to a Gemini Duplicates album for your protection.

It's important to clarify the distinction between *potential* and *exact* duplicates. For example, after scanning my entire OS X Photos library, Gemini 2 reported 4.12GB worth of potential duplicates, yet only 102.1MB qualified as exact duplicates worthy of deletion. In my tests, the software was exceptionally accurate detecting exact matches, but potential dupes often include similarly named music tracks or photos with similar poses and slight framing adjustments you may prefer to keep.

Overall, MacPaw has done a great job streamlining and tuning up

GEMINI 2 USERS can review scan results using an intuitive window that separates exact duplicates from similar matches.



Gemini 2, but they've added a needless diversion in the process. The application now unlocks game-style achievements that allow users to "rank" higher the more it's used. Users can click the star icon in the upper right corner to see where they currently stand, or view hints on how to unlock additional achievements. Thankfully, there's a preference setting to disable such in-app notifications, which I found more distracting than fun.

BOTTOM LINE

Gemini 2 improves on a utility that was already quite good, but adding game-style achievements turns out to be a dubious new "feature." ■



GAME-STYLE ACHIEVEMENTS are more of a distraction than a true new feature in Gemini 2.

FOTOMAGICO 5: MORE IMPRESSIVE THAN PULLING RABBITS OUT OF A MAGIC HAT

BY J.R. BOOKWALTER

OS X PHOTOS makes it super easy to create basic slideshows from still images, but such presentations tend to be fairly basic, with only rudimentary control over the end results. That's why I've been a longtime fan of Boinx Software's FotoMagico (boinx.com/fotomagico), which blends iLife-style simplicity with a robust set of tools for creating impressive, visually rich slideshows in up to 4K resolution. Whether it's for a wedding, to enhance travel videos, or a visual scrapbook of family memories, FotoMagico gets the job done with style and grace.

That's no less true with the recently released fifth edition, which



FOTOMAGICO 5.0.6



AT A GLANCE

FotoMagico 5 makes it easy to create gorgeous slideshows on the Mac, complete with photos, videos, music, and text using pre-built stories or ready-made story parts.

PROS

- Reusable snippets, pre-built stories
- Improved text editing, placeholders
- Dark user interface

CONS

- Audio Marker Assistant requires BPM data for best results
- Basic edition lacks key features found in previous version
- Lightroom, Aperture access requires Pro version

PRICE

\$50; Pro version, \$100

COMPANY

boinx.com



further streamlines an already great application, making it easier than ever to create slideshows from pre-built snippets and royalty-free music capable of going far beyond OS X Photos.

IT'S EASY TO build slideshows using FotoMagico 5's Storyboard mode and rich palette of tools.

REUSE AND RECYCLE

After consolidating separate Home and Pro versions into a single package with version 4, FotoMagico 5 (boinx.com/fotomagico) shifts things into reverse, again splitting into two releases, one aimed at consumers, the other intended for professional photographers. This approach makes the \$50 basic edition cheaper than ever, while the new Pro version remains at the \$100 price established by the previous release; upgrades start at \$50.

Both versions adopt a new, darker user interface (with the option to switch back to the classic look if you want) which really helps make images pop off the screen, as well as Animation Assistant, which automates the process of enhancing slideshows with motion. Rather than treating every photo exactly the same, this feature accounts for the proper aspect ratio of portrait or landscape images, as well as video content and text.

FotoMagico 5 also introduces a feature called Snippets, a far more powerful way to build custom slideshows. Stories can be used to create complete, start-to-finish presentations using royalty-free music in a variety of themes like Sightseeing, Beach, or Zoo, each with pre-composed placeholder shots the user swaps out for their own images.

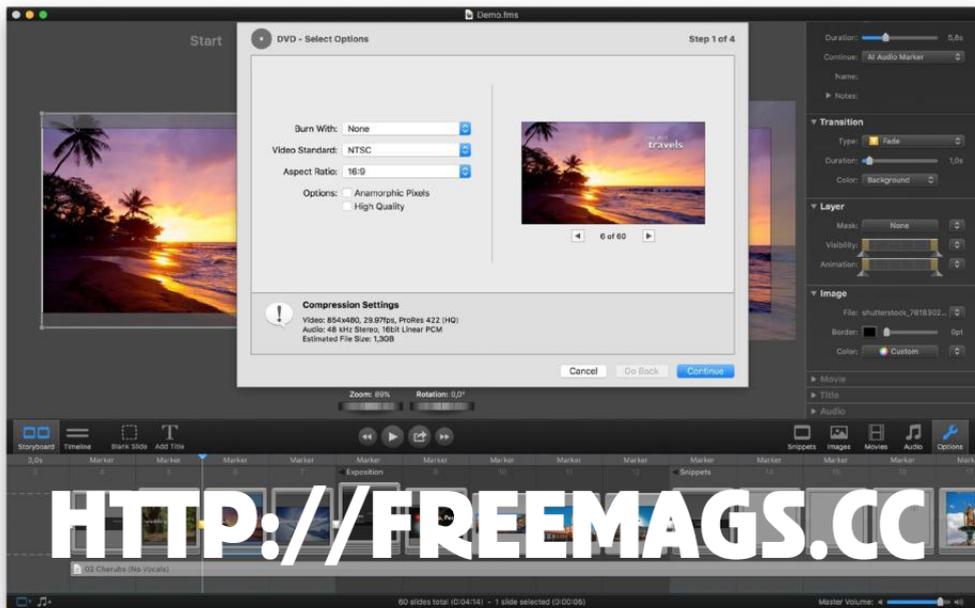
Stories are only a starting point. You can add, rearrange, edit, or delete individual slides as needed. There are also a variety of other drag-and-drop snippets for intros, titles, split-screens, effects, credits, and music, so even if you choose to build entire slideshows from scratch, FotoMagico 5 helps automate the process without the cookie-cutter look and feel of a template. You can purchase additional snippets from the Boinx website, or create your own to reuse later in other projects.

ABRACADABRA!

As a result of forking back into two applications, a number of previous features are no longer part of the consumer version, notably timeline

BOTH VERSIONS of FotoMagico 5 include the ability to build slideshows using snippets, but only the Pro edition now works in timeline view.





view, access to Lightroom or Aperture libraries, and the ability to export ProRes video files. But FotoMagico 5 Pro has several new tricks up its sleeve. Users can now incorporate placeholder text into presentations, such as EXIF metadata stored inside photos, slide numbers, or title and artist information from the currently playing music track.

Editing text in previous versions was rarely a pleasurable experience, but Boinx finally kicked the slow, inefficient OS X font panel to the curb, incorporating native formatting options directly into the Options sidebar. The company also answered the call when it comes to audio, introducing precise keyframe control over volume level—perfect for situations where automatic “ducking” of the music track can’t handle the job.

The new Audio Marker Assistant makes it easier to synchronize images against music. Control-click an audio track, select Audio Marker → Assistant from the contextual menu, then adjust the periodic markers setting for automatic results, or you can add custom markers by pressing the M key in real time as the track plays back.

Unless your audio file includes beats per minute (BPM) info embed-

FOTOMAGICO 5 includes a number of export options, but only the Pro version can handle ProRes and custom video files.

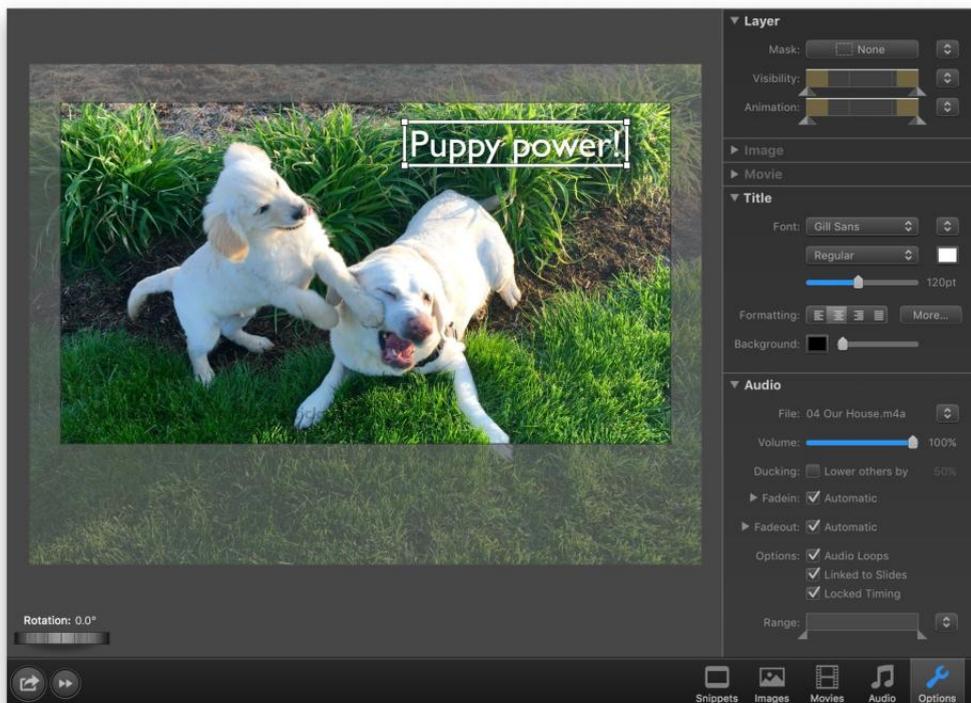
ded in the metadata (which the bundled Creative Commons songs do) or the track is popular enough to find this information on the Internet, this feature requires a fair amount of fiddling for best results. The assistant can't analyze songs to help automate the process, although third-party software like *beatunes* (\$35; beatunes.com) can be used to detect and add BPM data to an entire iTunes library in a few clicks.

BOTTOM LINE

FotoMagico 5 is a dazzling new edition of an already fantastic, affordable slideshow solution for all Mac users, but the Pro version offers the most bang for the buck. ■

GOODBYE, OS X font panel.

FotoMagico 5 now includes a faster way to format text without leaving the Options sidebar.





GRAPHICS AND DESIGN

QUARKXPRESS 2016: NEW FEATURES HELP YOUR DOCUMENTS LOOK THEIR BEST

BY JAY J. NELSON

YOU HAVE TO HAND IT TO QUARK: every few versions it adds a major new capability that has never existed in any program before. With QuarkXPress 2016 (quark.com/products/quarkxpress), it's added the ability to—cue drum roll, please—convert imported PDF, EPS, and Adobe Illustrator files to native editable QuarkXPress objects. You can even convert objects or entire pages from Adobe InDesign, Adobe Illustrator, Microsoft Office (including Word, Excel, and PowerPoint), CorelDraw, Affinity Designer, and other apps.

QuarkXPress 2016 has other innovative new features, many of them based on requests from users. QuarkXPress 2016 is also impressively fast and stable, and those upgrading will be delighted

QUARKXPRESS 2016



AT A GLANCE

QuarkXPress 2016's new ability to convert objects and pages from other programs makes this version a vital upgrade for any user.

PROS

- Groundbreaking ability to convert a wide range of documents to native QuarkXPress items
- Exporting to HTML5 is free and easy
- Performance is fast and stable.

CONS

- Minor quirks when converting objects from other apps

PRICE

\$849; education price, \$89; non-profit price, \$299; upgrade from QuarkXPress 2015, \$179; upgrade from QuarkXPress versions 3 to 10, \$349

COMPANY

Quark

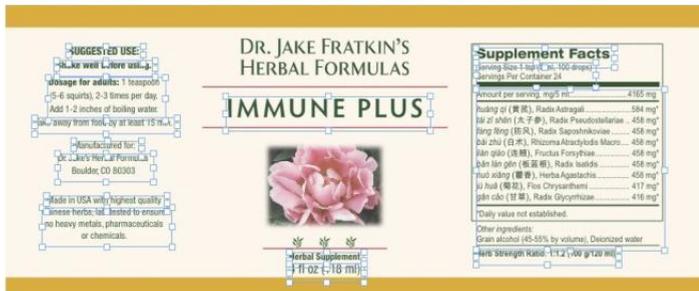
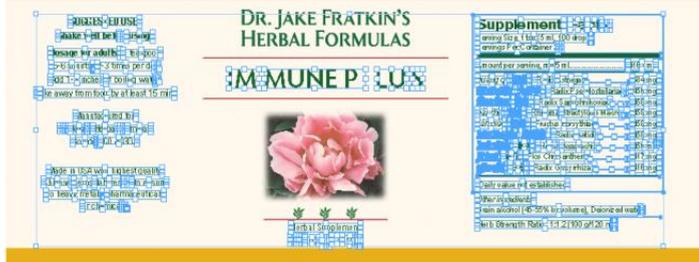
that XTensions written for QuarkXPress 2015 also work with QuarkXPress 2016 (as long as the XTension doesn't conflict with a new function). And unlike Adobe InDesign, QuarkXPress doesn't require an ongoing subscription. Its perpetual license lets you use the program forever.

CONVERT PDF, EPS, OR ADOBE ILLUSTRATOR FILES TO NATIVE QUARKXPRESS OBJECTS

Surprisingly, it takes only a few seconds for QuarkXPress 2016 to convert every object in a PDF, EPS, or Adobe Illustrator file to a native QuarkXPress object.

You don't have to convert an entire document; if you import the file into a QuarkXPress picture box and crop it, only the area showing in the box will be converted. You also have the option of keeping the original picture box intact and converting a copy.

The importance of this capability cannot be overstated. Designers often work with charts, graphs, and



A PRODUCT LABEL in Adobe Illustrator (top), converted to InDesign (center) and converted to QuarkXPress (bottom), with text objects selected.

almost never use the correct colors or fonts for a company's brand. Conveniently, when these items are converted to native objects in QuarkXPress 2016, their colors are added to the Colors palette where they can be replaced all at once with your brand-approved colors. The text in these graphics is also converted to native QuarkXPress text, so you can easily format it to match the brand by using Style Sheets.

Speaking of text, when converting from these other formats, QuarkXPress does an amazing job of putting text that belongs together into one text box. In contrast, converting these files in Adobe Illustrator breaks the text into so many text objects that it's almost impossible to edit them. (Many designers prefer to rebuild artwork from scratch rather than wrestle with this mess.)

After converting, vector graphics become native QuarkXPress objects and Adobe Illustrator paths become QuarkXPress paths with the exact same Beziér anchor points as in Illustrator. You can then use the Beziér (pen) tools in QuarkXPress to adjust them.

Here's one timesaving use for these conversions: Publications almost always receive advertisements in PDF format, and once they're converted to native QuarkXPress objects, the publication can update prices, dates, and colors inside the ad. That's never been possible in a page-layout program before.

Also, publishers who import charts or maps now have a unique trick available to them. After converting to native QuarkXPress objects, the chart or map can be resized without changing the size of the text within it. (The Scale feature in QuarkXPress lets you choose which attributes to scale.)

To test QuarkXPress's ability to convert a wide variety of files, I scavenged up the most complex files I could find, dating back to the early 1990s. Unbelievably, every EPS, PDF, and AI file converted perfectly and within seconds. However, any fonts used in these files need to be active on your computer, or else QuarkXPress displays its "missing font" dialog. (If you subsequently activate those fonts, the document displays normally.) Unfortunately, sometimes when converting PDF files

PUBLICATIONS ALMOST ALWAYS RECEIVE ADVERTISEMENTS IN PDF FORMAT, AND ONCE THEY'RE CONVERTED TO NATIVE QUARKXPRESS OBJECTS, THE PUBLICATION CAN UPDATE PRICES, DATES, AND COLORS INSIDE THE AD. THAT'S NEVER BEEN POSSIBLE IN A PAGE-LAYOUT PROGRAM BEFORE.

each line of text ends with a hard return that may need to be removed before editing the text. That's a limitation of how the PDF was originally generated.

CONVERT INDESIGN, MICROSOFT OFFICE, AND OTHER OBJECTS TO NATIVE QUARKXPRESS OBJECTS

The magical conversions continue: You can copy objects from many other applications—including Adobe InDesign, Illustrator, CorelDraw, Affinity Designer, Word, Excel, PowerPoint, and Apple Pages—and paste them into QuarkXPress as native QuarkXPress objects. And yes, you can successfully convert an entire InDesign page to QuarkXPress.

In my testing, every object or group of objects I copied from Adobe InDesign and Illustrator, and from Microsoft Word and Excel, converted to native QuarkXPress items flawlessly. PowerPoint slides converted well, but each line of text became its own box. Graphics from Apple Pages converted as expected, but text lost its formatting. To maintain

SUGGESTED USE:
Shake well before using.

Dosage for adults: 1 teaspoon (5-6 squirts), 2-3 times per day.
Add 1-2 inches of boiling water.
Take away from food by at least 15 min.

Manufactured for:
Dr. Jake's Herbal Formulas
Boulder, CO 80503

Made in USA with highest quality Chinese herbs, lab-tested to ensure no heavy metals, pharmaceuticals or chemicals.

**DR. JAKE FRATKIN'S
HERBAL FORMULAS**

IMMUNE PLUS



Herbal Supplement
4 fl oz (118 ml)

Supplement Facts

Serving Size 1 tsp (5 ml, 100 drops)
Servings Per Container 24

Amount per serving, mg/5 ml	4165 mg
Huang qi (黃耆), Radix Astragalus	584 mg*
Shi zi shen (太子參), Radix Pseudostellariae	458 mg*
Jing ling (經絡), Radix Saposhnikovia	458 mg*
Bai zhu (白朮), Rhizoma Alcyonolobos Maero	458 mg*
Bian xian (仙艸), Fructus Forsythiae	458 mg*
Bian lan gen (板藍根), Radix Isatis	458 mg*
Huo xiang (藿香), Herba Agastache	458 mg*
Ju hui (菊苣), Ficus Chrysanthemum	417 mg*
Gan cao (甘草), Radix Glycyrrhizae	416 mg*

*Daily value not established.

Other ingredients:
Grain alcohol (45-55% by volume), Deionized water

Herb Strength Ratio: 1:1.2 (100 gr/120 ml)

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Other ingredients:
Grain alcohol (45-55% by volume), Deionized water

Herb Strength Ratio: 1:1.2 (100 gr/120 ml)

A LABEL IN Adobe Illustrator (top), converted to InDesign (center) and converted to QuarkXPress (bottom). The difference in display quality is obvious.

the formatting, Quark recommends exporting the document from Pages as a PDF file and then converting the PDF file in QuarkXPress.

This ability to convert objects from other applications opens a whole new world of graphic possibilities. For the first time, you can use the Smart Art tools in Microsoft Office applications to create flowcharts and then fine-tune them in QuarkXPress. Same for charts and graphs in Illustrator, CorelDraw, or Microsoft Office. This could fundamentally change the relationship between corporate chart producers and page-layout artists.

TEXT BLOCK CONVERSIONS ARE MORE USABLE IN QUARKXPRESS

While InDesign can convert a native Adobe Illustrator file into native InDesign objects (it can't convert PDF or EPS), the resulting text frames are broken up and difficult to use. In contrast, QuarkXPress 2016 converts the objects exactly as they were in Illustrator.

ON-SCREEN DISPLAY DRAMATICALLY BETTER THAN ADOBE'S

In QuarkXPress 10, Quark replaced the on-screen rendering engine and the results are far more accurate than what you see in Adobe InDesign, Illustrator, or other Adobe apps. The difference is very clear now that the user can convert those documents into QuarkXPress.

INSTANT EXPORT TO HTML5

HTML5 is the language of modern websites, ebooks, and some mobile apps. QuarkXPress 2016 can export anything you create (or convert) to an identical version as an HTML5 publication. This means you can export a reflowable ePub, a fixed-layout ePub file, or a web version of your document with one or two clicks.

You can add interactivity to any page item using the HTML5 palette, and QuarkXPress 2016 will export a fully functioning version by generating a combination of HTML5, CSS, and JavaScript. Besides allowing you to import and control an audio or video file, you can make buttons that perform various actions (go to another location, a webpage, hide and show objects, and so forth), create hotspots and pop-ups, flip pages, rotate and slide items on the page, zoom into pictures, create multi-image slideshows and carousels, send email, use HTML5 widgets,

geolocate the user, or display the live content of a webpage.

Perhaps most interestingly for publishers, you can create a Scroll Zone that displays only a portion of the content of a text box, but then the user can use scroll bars attached to it to view the rest of the story. And for the first time, HTML5 now allows almost every typographic trick in QuarkXPress, including runaround text, justified and hyphenated text, vertically justified text, text indents (indent here and discretionary returns), text color opacity, text aligned with baseline, outline, and multi-level bullets and numbering (in Fixed Layout ePubs), custom kerning and tracking, tabs and tab stops, fractions and prices, and native “pop-up” footnotes (in Fixed Layout ePubs).

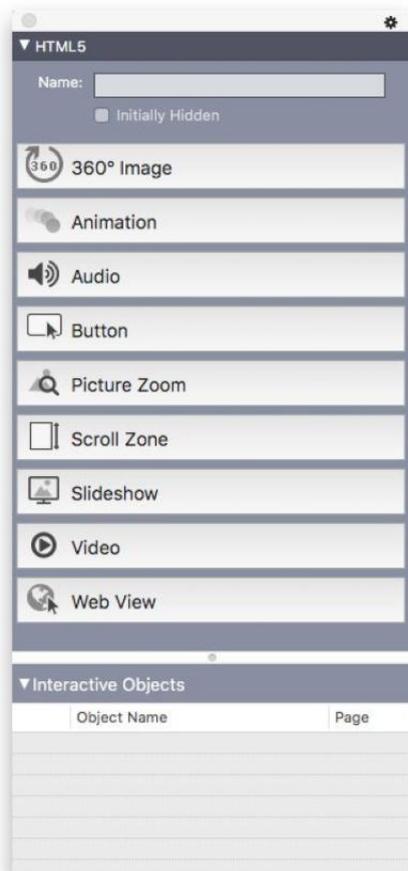
It's important to remember that QuarkXPress offers two kinds of HTML5 export formats: EPUB and HTML5 Publication. EPUB is for documents intended to be read on eBook readers such as the Kindle or iBooks on your Mac or iOS device, while HTML5 Publications are read inside a browser. HTML5 Publication is best used for brochures, interactive content marketing pieces, catalogs, and perhaps magazines. If you add interactivity, they can feel like an app, but you have to host them on your own web server.

(In order to include interactivity in an HTML5 publication, Quark includes a web app in the exported package. This means that your HTML5 publication must be hosted on a web server to be seen by others. Fortunately, your Mac includes a built-in web server you can employ to instantly share the publication over the Internet. QuarkXPress also has a preview button that exports and opens your publication in your computer's default browser so you can test your publication's functionality before sharing it with others.)

OPENTYPE STYLISTIC SETS

Many advanced OpenType fonts contain Stylistic Sets, which create harmonious combinations of letterforms chosen by the font designer. This comes in handy when

THE HTML5 PALETTE in QuarkXPress 2016 lets you add interactive behaviors to page items.



there are several alternate versions of a character, and you simply want the nicest choice for your text. (For more on this topic, see Lesa Snider's article "How to access advanced OpenType features in a variety of apps"; go.macworld.com/opentypeinapps.)

QuarkXPress now gives you access to Stylistic Sets in the Measurements palette. Click the green O to see them. (First, choose an advanced OpenType font, which often has "Pro" in its name.) OpenType options in QuarkXPress are far more convenient to use than those in Adobe's products, which are squirreled away in a submenu of a panel's tiny fly-out (side) menu.

COLOR PICKER AND MULTI-COLOR BLENDS

Formerly an XTension, the new Color Picker lets you click on any item (including imported pictures) to add new color swatches to your layout. Logically, it's located at the bottom of the Colors palette.

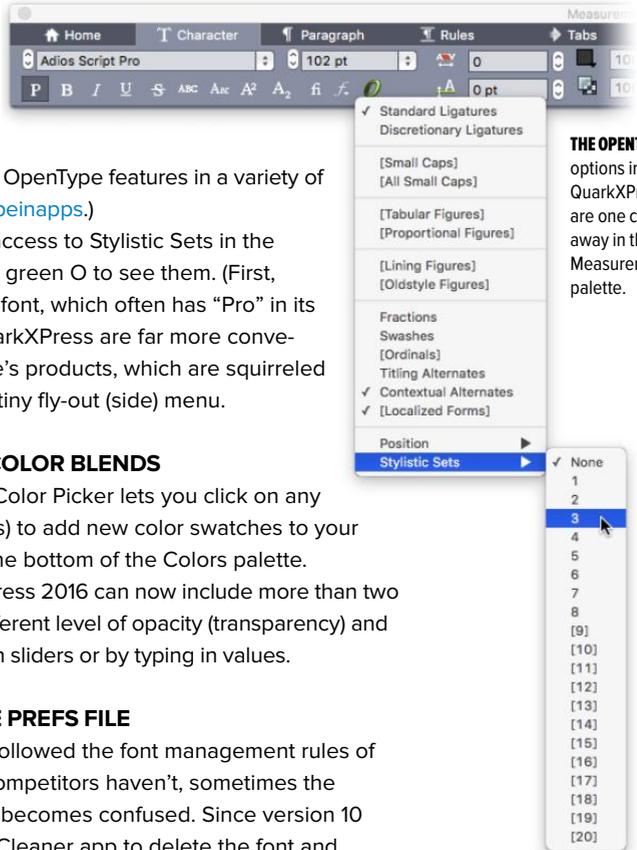
Blends (gradients) in QuarkXPress 2016 can now include more than two colors. Each color can have a different level of opacity (transparency) and tint, and you can adjust them with sliders or by typing in values.

CLEAN CACHES AND DELETE PREFS FILE

Because Quark has historically followed the font management rules of the operating system while its competitors haven't, sometimes the information it stores about fonts becomes confused. Since version 10 they've provided a QuarkCacheCleaner app to delete the font and picture cache files used by QuarkXPress. Responding to user requests for troubleshooting, this utility now has an option to delete the QuarkXPress Preferences file as well. (You'll find it in the Tools folder inside the QuarkXPress 2016 folder.)

OTHER USER-REQUESTED IMPROVEMENTS

A common complaint from designers is that the items in palettes and panels are too small to see, especially on smaller screens with high resolutions. Quark has begun to address this issue with an optional 50 percent larger size for the icons and text in the Measurements palette,



THE OPENTYPE
options in
QuarkXPress
are one click
away in the
Measurements
palette.

which is by far the most used palette in QuarkXPress.

You can now pinch, zoom and rotate items using gestures on your Mac's touchpad.

Quark finally added a Fit Box to Text feature, so that if your text is shorter than the box, or if it overflows the box, the box will resize to fit the text. This feature even balances text in boxes that have multiple columns of text.

As you drag an item, indicators conveniently appear to show you its spacing in relationship to other items. This makes it easy to align and uniformly space items. In QuarkXPress 2016, guides now appear that show when the edges and centers of text columns and gutters align with other items, even in multi-column text boxes.

The Find/Change feature now remembers your most recent searches and allows you to search for nonbreaking spaces and characters.

Content variables can now wrap onto multiple lines just like regular text, which is useful for longer headers and for created/modified/printed slugs.

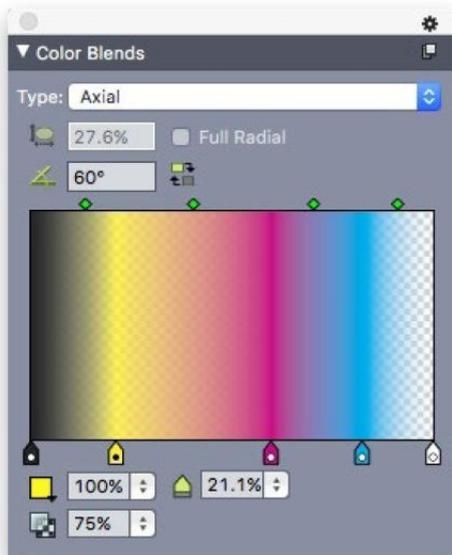
Print experts will appreciate support for ICCv4 color profiles.

STILL MISSING IN ACTION

Quark dropped out of the features arms race with InDesign many years ago, instead focusing on providing the features most requested by its users. For example, QuarkXPress still lacks a Links palette. To determine the name and location of an imported graphic, you still need to open the Usage dialog. (Granted, you can select one or more picture boxes on a page first and when you open the Usage dialog those pictures are highlighted in it for you. Conversely, when you click on an item in the Usage dialog you can click the Show button to be taken to that item in the QuarkXPress document.)

Another feature from InDesign I'd like to see in QuarkXPress is multi-place: the ability to load the cursor with multiple graphics files and then click to import each one. In light of QuarkXPress 2016's new ability

COLOR BLENDS CAN now include multiple colors, each with varying levels of tint and opacity.



to convert PDF files to native objects, being able to quickly import each page of the PDF could save time.

BOTTOM LINE

QuarkXPress 2016's new ability to convert objects and pages from other programs makes this version a vital upgrade for any user. The ability to export HTML5-based publications with interactivity will make modern publishers happy, and the dozen or so smaller improvements add efficiency to an already fast and efficient program. ■

**FOR THE FIRST TIME,
YOU CAN USE THE
SMART ART TOOLS IN
MICROSOFT OFFICE
APPLICATIONS TO
CREATE FLOWCHARTS
AND THEN FINE-TUNE
THEM IN QUARKXPRESS.**

Hot Stuff

What We're
Raving About
This Month



STANDARD LUGGAGE CO.'S CARRY-ON BACKPACK

The \$179 Carry-On Backpack by Standard Luggage Company (standardluggage.com) was intended for all types of travel, whether you're going on a weekend getaway or some serious backpacking. You can tuck away the backpack straps and turn it into a duffel bag by holding it from the side handle, or add the shoulder strap and carry it like a messenger bag. The Standard Luggage backpack has a clamshell design, so you can open it and lay it out flat when you're packing. In addition, it comes with a separate pocket for storing a 15-inch MacBook Pro. The main compartment can be expanded, too, if you happen to buy more stuff during your travels. —OSCAR RAYMUNDO

Hot Stuff

HEX SOLO WALLET CASE FOR THE iPhone 6/6S

One of our favorite iPhone 6/6s wallet cases is Hex's \$40 Solo Wallet (shophex.com). It's not a traditional folio design, but we ended up preferring its placement of two handy card slots right in the back. Sliding out your credit cards when you walk up to a checkout counter is a snap—but the case is also engineered in such a way that whatever you secure in the slots doesn't fall out, even if your iPhone ends upside down. The Solo Wallet also comes with the option of a neat "stingray" texture that offers an excellent grip, and combines easy installation with a unibody design that protects your handset without requiring a cover. That's a real time saver when you need to answer a call or check your screen for notifications, and also very handy for use with car mounts, since you won't need to fold back a front flap. —**MARCO TABINI**



ADONIT PIXEL

Adonit's new Bluetooth stylus, the \$80 Pixel (adonit.net), is more accurate and responsive than its older products, but still no match for the Apple Pencil. However, the Pixel's selling point is compatibility. Apple Pencil works with just the 12.9-inch and 9.7-inch iPad Pro models, while the Pixel is compatible with the iPhone 5 line, 6/6s, 6 Plus/6s Plus, third- and fourth-gen iPads, iPad minis from 1–4, both iPad Air models, and the 12.9-inch iPad Pro. The Pixel doesn't work with the little Pro just yet. What's more is that the Pixel is an affordable pen that packs a ton of features—pressure sensitivity, palm rejection, two shortcut buttons, and a 1.9mm Pixelpoint tip to name a few—into a sleek, easy-to-use package. Its improved tip is a big upgrade from the older Adonit devices, thanks to tip drag. I also loved the grip sensor, which meant I could just pick up the pen and start writing. For non-Pro users, the Pixel is a no-brainer. —CAITLIN MCGARRY





Essential gear for working with an iPad Pro

Who cares if it's a laptop replacement as long as you're getting your work done? These accessories can help.

BY JASON CIPRIANI

The last time we took a look at extra tools and accessories to help you get more work done on an iPad, the iPad Pro was nothing more than a glass slab of rumors.

As we now know, the iPad Pro is very real. Whether you're thinking of picking up an iPad Pro, or already have one and want to get more out of the tablet, here are some accessories I've found that make working on the iPad Pro a breeze.

APPLE'S SMART KEYBOARD

There are several Bluetooth-enabled keyboards available for both sizes of the iPad Pro, but they're often bulky and require charging. It only makes sense to use a keyboard that takes

advantage of the iPad Pro's Smart Connector. Apple's Smart Connector provides power to the keyboard, and provides two-way communication between the keyboard and iPad Pro.

Unfortunately, right now there's only two options for the 12.9-inch iPad Pro: Logitech Create (go.macworld.com/logitechcreaterev) and Apple's Smart Keyboard. For the 9.7-inch iPad Pro, so far only Apple's keyboard uses the Smart Connector.

I've tested Logitech's Create keyboard and found it to get the job

THE SMART KEYBOARD

never needs charging and pairs automatically, thanks to the Smart Connector.





done, however it was bulky and difficult to take the iPad Pro out of when needed.

Apple’s Smart Keyboard is currently the best Smart Connector–enabled typing accessory for either iPad Pro model. The 12.9-inch model (go.macworld.com/ipadpro129) retails for \$169, while the 9.7-inch model (go.macworld.com/ipadpro97) can be had for \$149.

ADAPTERS

With only one port on the iPad Pro, it’s only natural you’ll need to purchase an adapter or two.

When it comes to official adapters from Apple, you can choose between the \$39 Lightning to USB 3 Camera Adapter (go.macworld.com/lightningusb3), the \$29 Lightning to USB Camera Adapter ([go.macworld.com/lightningusb camera](http://go.macworld.com/lightningusbcamera)), or the \$29 Lightning to SD Card Camera Reader (go.macworld.com/lightningsdcard).

With that said, if you own the 12.9-inch iPad Pro you should limit your options to the SD Card Reader and the Lightning to USB 3 adapter. Why? Because those two adapters offer USB 3.0 support, and only the larger

tablet is equipped with the same technology. A USB 3.0 connection will decrease the amount of time you spend waiting for photos and videos to transfer from your camera or card to your iPad Pro.

I currently carry the Lightning to USB 3 adapter. Not only can I connect USB devices to my iPad Pro using this adapter, I can continue to charge the iPad Pro through the Lightning port on the adapter. Plus, you can use it to connect USB microphones, keyboards, and Ethernet adapters to your iPad.

FASTER CHARGING

You can cut the amount of time it takes to fully charge the 12.9-inch iPad Pro in half when using Apple’s 29W power adapter (go.macworld.com/29wpower) and a USB-C to Lightning cable.

APPLE CALLS IT the Lightning to USB Camera Adapter, but it can be used to connect a variety of USB devices to your iPad Pro.



THIS LIGHTNING-TO-USB-C CABLE lets you use the 29W USB-C power adapter (that typically comes with the 12-inch MacBook but is also sold separately) to charge your iPad Pro in half the time.

It's something Apple should include with every iPad Pro, but until then it's something every iPad Pro user should pick up.

The adapter itself is \$49. In addition to the adapter, you'll need a USB-C to Lightning cable. You can get a 1-meter cable (go.macworld.com/usbc2lightning1m) for \$25, or double the length to 2 meters (go.macworld.com/usbc2lightning2m) for \$35.

My tests have shown the standard 12W power adapter will charge the iPad Pro in 5 hours, whereas the 29W adapter cuts that time in half, to 2.5 hours.

APPLE PENCIL

I'm not sold on the Apple Pencil (go.macworld.com/applepencilrev) as a must-have accessory. I rarely ever use mine, save for the occasional jotting of notes and game of Sketch-Party TV (sketchparty.tv) after its

latest update.

Still, the Pencil is easily the best digital writing and sketching experience available on the iPad Pro. And for those who often need to sign documents, sketch product designs, or take notes in class, the Apple Pencil is the tool you want to have on hand.

At this year's WWDC, hopefully we will learn more about Apple's future plans for the iPad Pro, not only in terms of software, but also in allowing access to its Smart Connector. More importantly, hopefully Apple will begin giving more than just Logitech access to the connector's tech.

As we recently saw with the Logi Base charging stand (go.macworld.com/logibase), we're only beginning to learn just how many tricks the connector has up its sleeve. ■



SINCE THE iPad PRO is the only iPad that can use the Apple Pencil, that's your best choice for a smart stylus.



VIDEO

To view this video, go to go.macworld.com/mophiechargervid



Mophie launches wireless chargers to keep your phone powered up wherever you go

Mophie's "Charge Force" products were designed to wirelessly charge your phone while at home, in the car, or the office.

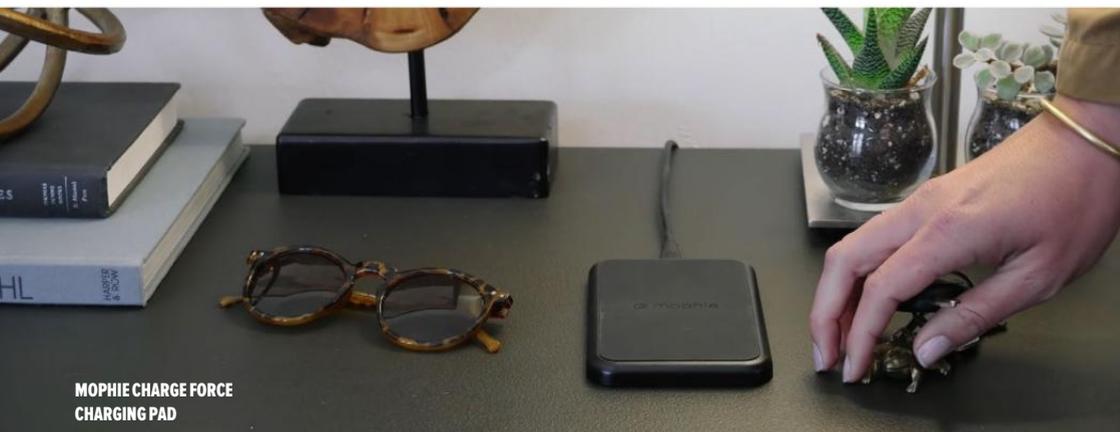
BY OSCAR RAYMUNDO

Wireless charging is slowly becoming more mainstream, but one company is going all-in to try to boost its adoption. In late May, Mophie (mophie.com) released three wireless chargers that can charge your Mophie-encased phone on contact. This “Charge Force” product line includes a charging pad for your nightstand, a vent clip for your car, and a desk mount for the office—all with built-in magnets to help stabilize your phone and keep it in place.

These wireless chargers require a compatible Mophie case. The company tells us that all Mophie cases moving forward will be equipped with this technology. In fact, Mophie’s Juice Packs for the Samsung Galaxy S7 that went on sale earlier this year are already Charge Force-compatible.

I got to try the Charge Force line for a little bit recently, and I was impressed with how strong the

magnets were, which is definitely necessary if they’re meant to hold a phone with a battery pack. The vent clip for the car seems to be the most appealing choice. You can use it not only to charge your phone, but also to keep your phone up on the dashboard if you need to navigate for directions. Once you set up the vent clip, you won’t need to ever fumble around your car to find a charging cable ever again. I wasn’t



**MOPHIE CHARGE FORCE
CHARGING PAD**

able to test it under real driving conditions, however, so I still have to see how well the phone stays in place once it's charging, and how easy it is to remove the phone with one hand while on the road.

If you don't drive very often but are still curious to try wireless charging, either the charging pad or the desk mount could work. But I wouldn't recommend getting both. Sure, you may never experience "low-battery anxiety" with a charging pad at home, a desk mount at work, and a vent clip for all those times driving in between. But considering that the Mophie cases already boost your battery life—some by almost 120 percent—I don't see the need to have an entire wireless charging ecosystem everywhere you go. It's important to have our devices charged at all times, but what's the point of having them continuously charged to 100 percent day in and day out?

You can purchase the charging pad bundled with a Juice Pack right now starting at \$99.95 on Mophie.com (go.macworld.com/mophie-wirelesschrg), BestBuy.com (go.macworld.com/mophiewirelessbb), and Apple.com (apple.com/search/mophie). The vent clip and the desk mount are each available for \$59.95. ■



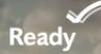
TOP: Mophie Charge Force Vent Clip. **BOTTOM:** Mophie Charge Force Desk Mount.

Make sure you

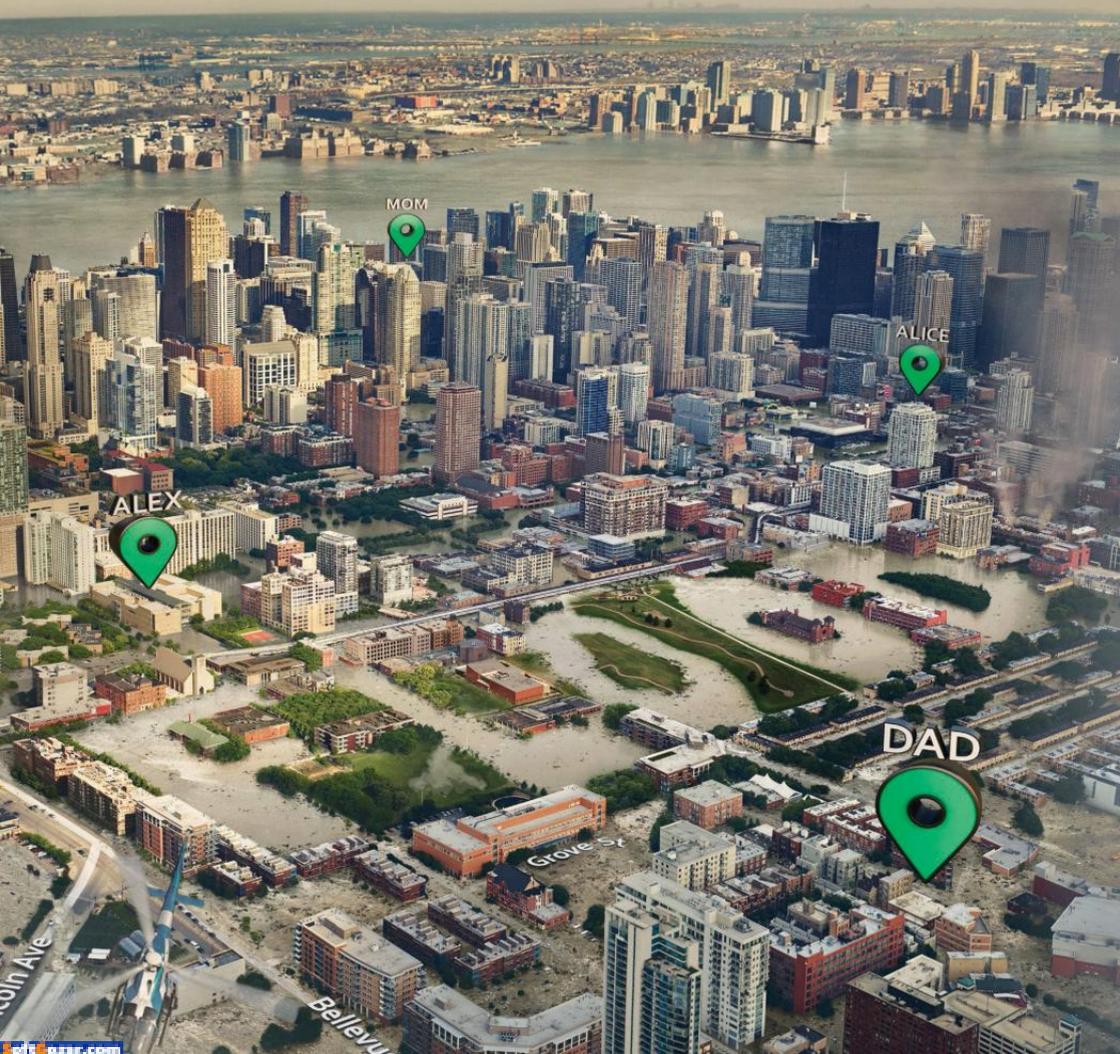
know where to find

your family

in an emergency



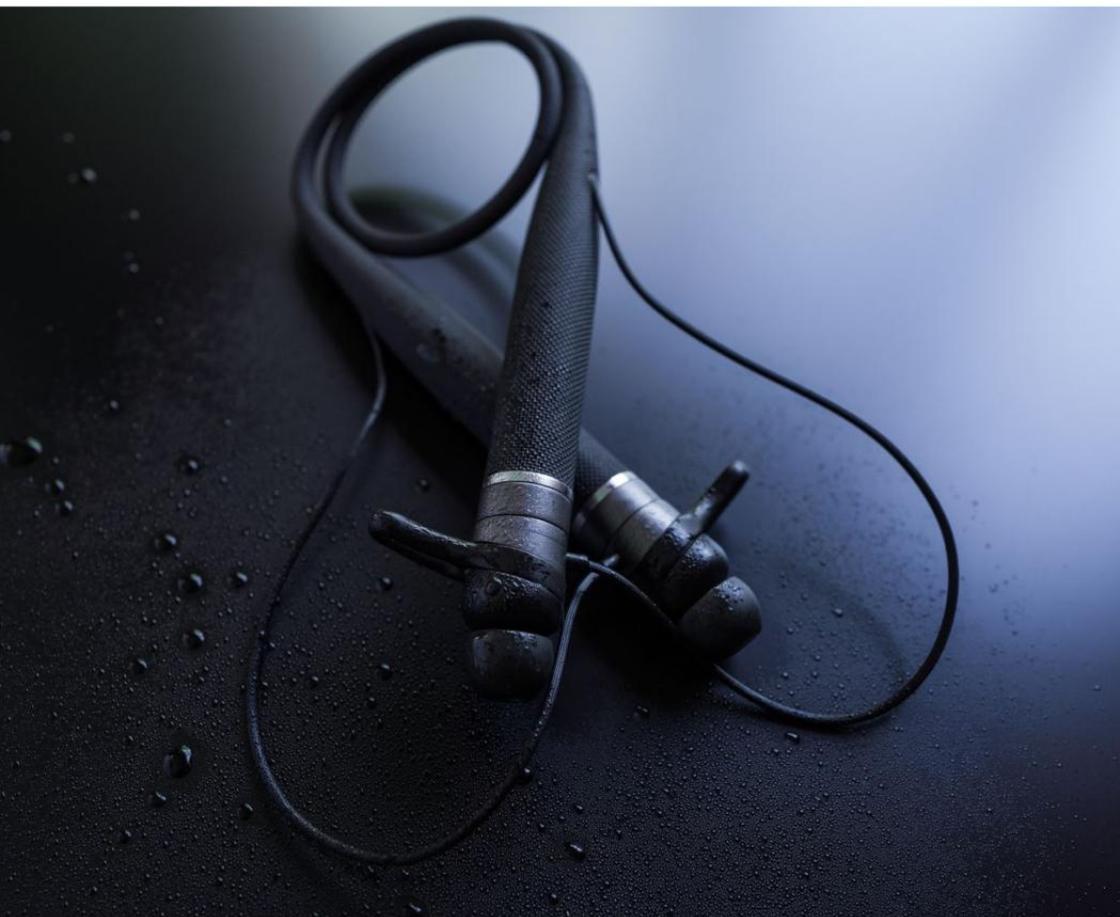
START YOUR PLAN AT [READY.GOV](https://ready.gov)

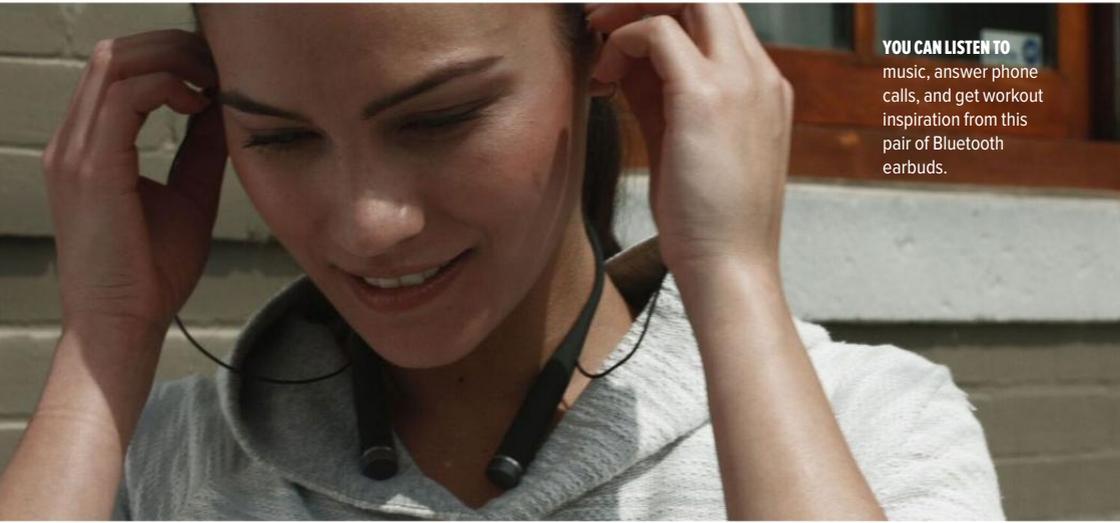


Hands-on with Vi, the fitness coach in your ear

This new activity tracker is like a Fitbit, Amazon Echo, and a pair of Beats rolled into one product.

BY CAITLIN McGARRY





YOU CAN LISTEN TO music, answer phone calls, and get workout inspiration from this pair of Bluetooth earbuds.

On an unseasonably hot Wednesday at the end of May, a little voice in my head was telling me to run faster. “It’s time to get your heart rate up,” she told me. This wasn’t my inner masochist, like it usually is. On this particular run, it was the voice of Vi, a digital assistant baked inside a pair of prototype in-ear headphones.

Vi is the first consumer product from wearable technology company LifeBeam, which has provided the tech backbone for products from Samsung, Under Armour, and JBL, among others. Now LifeBeam is partnering with Harman/Kardon for Vi, which debuted on Kickstarter ([go. macworld.com/kickstartervi](http://go.macworld.com/kickstartervi)) recently.

WHO IS VI?

At first glance, LifeBeam’s wrap-

around headset resembles the LG Tone, a pair of Bluetooth headphones with neck controls for volume. And while Vi can be used to jam out on your daily commute like any other Bluetooth headphones, this product is like no other I’ve used.

Vi combines a voice-activated digital assistant similar to Apple’s Siri or Amazon’s Alexa with the activity-tracking features of a Fitbit band in a pair of LG-like headphones. The

earbuds have a slew of sensors packed inside that track your heart rate, heart rate variability, motion, and elevation while you're running. While you're running, Vi will analyze your heart rate and tell you to speed it up to really burn some fat. With Spotify and Apple Music integration, Vi will select up-tempo tunes with the right beats per minute to get your blood pumping, and you can ask her to skip songs. Instead of glancing at your wrist to see your stats, just ask Vi.

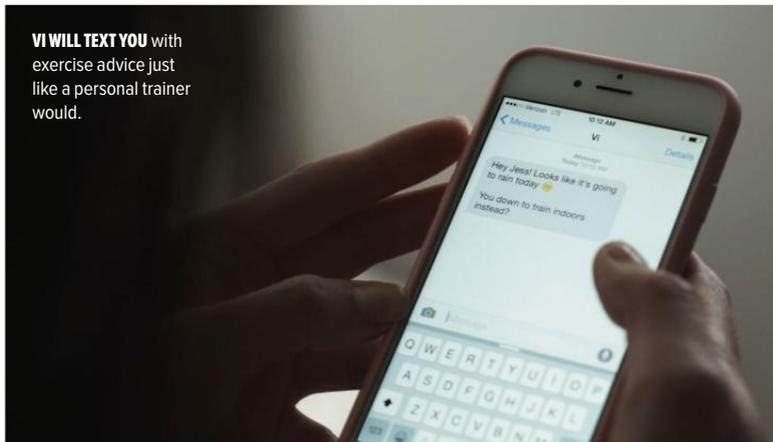
There is no shortage of smart assistants, but none of them are a suitable personal trainer. That's where Vi comes in.

HOW IT WORKS

When you unbox the headphones, you'll pair them to your iPhone or Android device like any other

Bluetooth product. Then you'll enter your goals in the Vi app. Do you want to lose weight? Do you want to maintain your current fitness level? Are you training for a race? With all of this info, plus the data Vi collects from your body, you'll get incredibly personalized training advice—or so LifeBeam cofounder and CEO Omri Yoffe told me during my demo of Vi on a treadmill in an office building just off Park Avenue.

You can chat with Vi verbally or via SMS, same as you would a real life personal trainer. If the weather is crappy, Vi will text you some advice to adjust your normal outdoor workout to an indoor training session. You can message Vi about your sleep or what you're eating. Vi is HealthKit-integrated so the assistant can read data from your other



VI WILL TEXT YOU with exercise advice just like a personal trainer would.

health apps if you grant access. Unlike an actual fitness coach, Vi won't admonish you for skipping workouts or make you run stairs for eating poorly. It's all about positive reinforcement, Yoffe told me.

FIRST IMPRESSIONS

Before I hit the treadmill with Vi's voice in my ear, I was skeptical. "I'm not sure I would ever wear this running," I wrote in my notes while watching another journalist take her turn on the treadmill. I've used a gazillion fitness trackers before, but none on my head.

I laced up some sneakers and hopped on the treadmill, earbuds snugly placed around my head. I started walking, and Vi told me my heart rate. Then she told me to increase my speed to get in the fat-burning zone.

We're all used to talking to our devices by now, and chatting with Vi was no different. She responds to various commands, but you're not gonna have a full-blown conversation. (Not that you'd be able to do so while running anyway.) When she told me my heart rate, I could actually hear the thump of my heart beating in my ears, which was both cool and slightly strange. The earbuds them-

selves were more comfortable than the cheap sport pair I bought but almost never use. The Harman/Kardon sound was above average, as expected. I'm more interested in Vi's possibilities, though. Yoffe told me that Vi is sort of like a fitness-minded version of Samantha from the Spike Jonze film *Her*. One day, LifeBeam's headset will be a pair of

wireless earbuds that you can chat with any time.

I only tested out a prototype of Vi for a few minutes, but I'm intrigued to see if the final

product turns out to be the personal trainer I so desperately need but don't want to pay for. At launch, the device will work best for runners, but software updates will expand Vi's training capabilities to swimmers and bikers down the line. The headphones will run continuously for eight hours on a single charge—not bad for a pair of Bluetooth earbuds.

Vi is currently available to preorder on Kickstarter for \$199 and will retail for \$249. The device starts shipping in December. ■

SHE RESPONDS TO VARIOUS COMMANDS, BUT YOU'RE NOT GONNA HAVE A FULL-BLOWN CONVERSATION.



SOFTWARE

PARALLELS ACCESS 3.1: REMOTE ACCESS ON STEROIDS, NOW FOR iPad PRO

BY J.R. BOOKWALTER

THE ABILITY TO REMOTELY access desktop computers on mobile devices feels futuristic every time I do it, but that captivation wears off right around the time I have to pinch and zoom to see what's on screen or attempt to get any real work done from a remote system.

Luckily, there's Parallels Access (go.macworld.com/parallels). Parallels Access addresses these problems by allowing iOS and Android devices to not just access, but actually use Mac and Windows computers from anywhere there's an internet connection. Rather than replicate the computer's display like other virtual network computing (VNC) apps do, Parallels Access adapts larger screens to smartphones, tablets, or web browsers.

ACCESS 3.1



AT A GLANCE

Parallels Access offers fast, optimized remote access to Mac and Windows computers from any iPhone, iPad, or iPod touch tailored expressly for mobile devices.

PROS

- Native support for iPad Pro; 3D Touch on iPhone 6s
- Desktop Resolution setting
- Apple Pencil support

CONS

- Desktop Resolution bug on MacBook Pro connected via Thunderbolt Display
- Folders don't sync between devices
- No 3D Touch Quick Action on iPhone 6s
- Desktop agent drops support for OS X Lion 10.7

PRICE

\$20/year

COMPANY

Parallels

MAKING THE CONNECTION

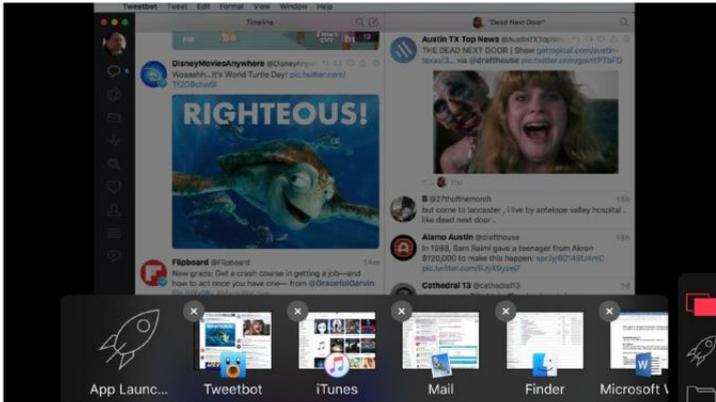
Unlike traditional VNC apps, which typically cram entire desktop screens onto mobile devices, Parallels Access intelligently adapts for smaller displays one window at a time. The agent software can be installed on up to five computers, and a single user account can access those systems from an unlimited number of iOS or Android devices for \$20 per year (also included free with Parallels Desktop for Mac).

Parallels Access doesn't just mirror your remote computer display—you're instead presented with the App Launcher, which allows you to launch desktop apps in a way that's similar to OS X's Launchpad. Rather than clutter up the screen with rows of unwanted icons, you can select up to 24 favorite applications per screen from your remote system.

To launch a remote application, simply tap its icon. The desktop agent will optimize the Mac's window to match the resolution of the device it's being viewed from—your iOS device, presumably—and then moves desktop windows right back into place once disconnected. It's easy to move between multiple windows or open applications from the App Switcher, but if you prefer to mirror the entire desktop

TOP: Parallels Access 3.1 allows a single account to remotely access up to five Mac or Windows computers from an unlimited number of mobile devices. **BOTTOM:** The App Launcher is used for creating shortcuts to your favorite remote applications, each one available with just a tap.





JUMPING BETWEEN multiple remote applications is a snap with the App Switcher feature in Parallels Access.

screen like other VNC apps, this can be done via Settings → Desktop Mode.

Both viewing modes offer smart magnification when making a selection for precise control during text selection, drag-and-drop, or using the on-screen cursor. With the latest update, you can now move the cursor while using iOS 9’s new trackpad mode from the on-screen keyboard.

MANAGE FILES

Parallels Access also includes a full-fledged File Manager, which allows you to browse, copy, move, or delete files on remote computers. This comes in particularly handy for moving files created on an iOS device to a connected Mac or Windows PC, or vice versa.

File Manager also taps directly into cloud storage services like Dropbox, Google Drive, and OneDrive, which can be used to copy or move files between local device storage and remote volumes. While connected to one computer, you can also access files from others on the same account, rather than disconnecting and reconnecting.

The exhaustive feature list doesn’t end there—while connected, Access can take advantage of the iOS microphone, and play audio from remote computers. If you don’t have a smartphone or tablet handy, you can connect from a modern web browser instead, although this method is not nearly as fluid as the mobile app.

After picking up the 12.9-inch iPad Pro when it launched last November, I couldn’t wait to use it with Parallels Access. There was just one

problem: While the existing app worked just fine, the developers hadn't yet updated it for the more expansive display. Five months later, that support is finally here, and it was well worth the wait.

PRO RESOLUTION AT LAST

Parallels Access 3.1 isn't a revolutionary update, but adds a number of convenient improvements. In addition to screen resolution and virtual keyboard support for small and large iPad Pro models, iPhone 6s owners can now use 3D Touch for drag-and-drop or to access contextual menus; Quick Action shortcuts from the home screen are absent, however.

The update also introduces Apple Pencil support, which is an ideal companion for Parallels Access. Instead of relying on smart magnifica-

LIKE IOS and OS X, App Launcher icons can be organized into folders, but selections on one device don't sync to others.

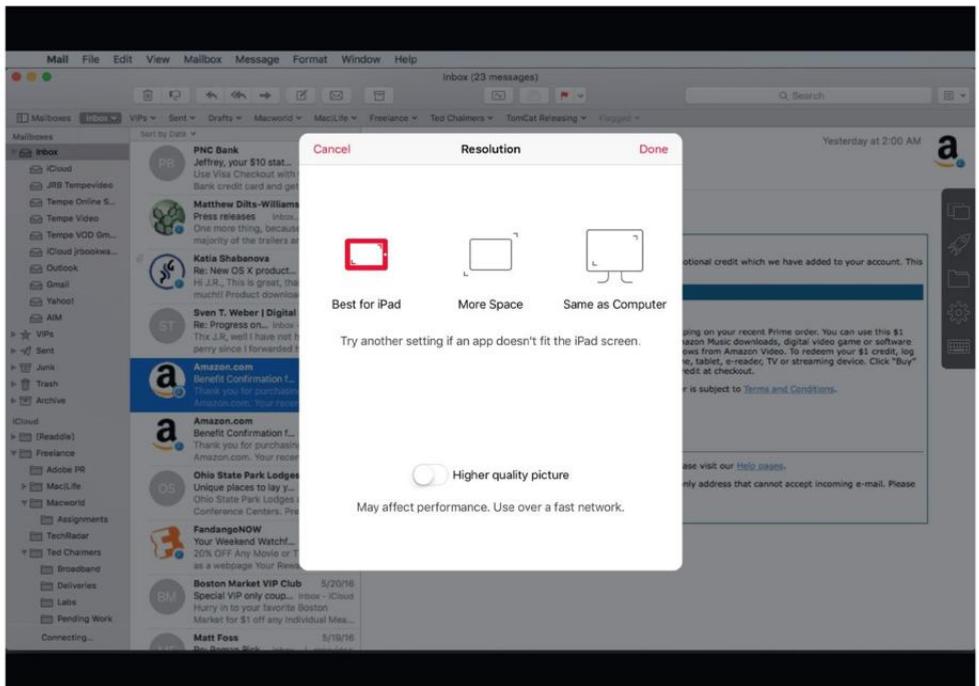


tion to maneuver tiny on-screen buttons, you can now tap with exceptional accuracy. Other nice touches are the ability to consolidate icons into folders on the App Launcher (although they don't yet sync between devices), and support for Windows 10 tablet mode, which turns the iPad into a faux Microsoft Surface.

The biggest 3.1 news is Desktop Resolution control. You can now select from three display options on the fly—Best For iPad, More Space, or Same As Computer—for more comfortable viewing. This feature works great with Apple Mail, Microsoft Excel, or just about any application that could benefit from a little more breathing room.

However, Desktop Resolution failed to work with my typical setup using a mid-2012 MacBook Pro with Retina Display connected to a 27-inch Thunderbolt Display. It works fine with the larger display unplugged, although the second and third resolution options are effective.

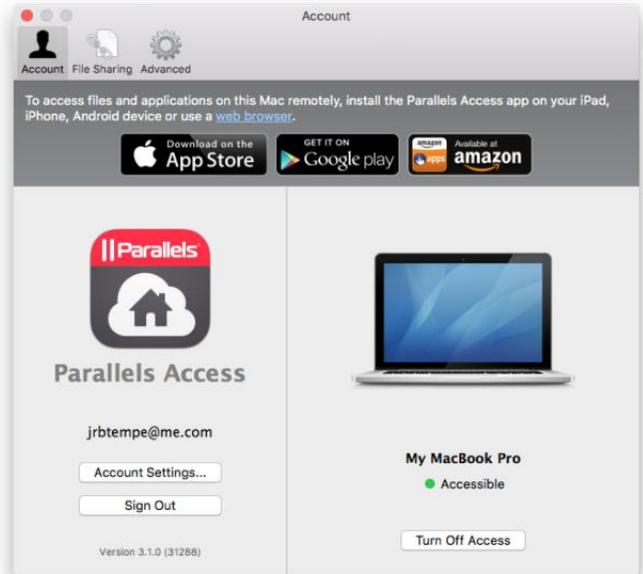
VERSION 3.1 introduces Desktop Resolution, with three settings for displaying windows from a remote computer.



tively the same. The desktop agent no longer supports OS X Lion 10.7, so this feature was also a no-show on my mid-2007 Mac mini, although remote access itself continues to work just fine.

BOTTOM LINE

With support for the latest iOS hardware including Apple Pencil, Parallels Access 3.1 continues to be the absolute best way to use desktop applications from a mobile device. ■



REMOTE COMPUTERS MUST have the Parallels Access desktop agent installed, but version 3.1 removes support for OS X Lion systems.

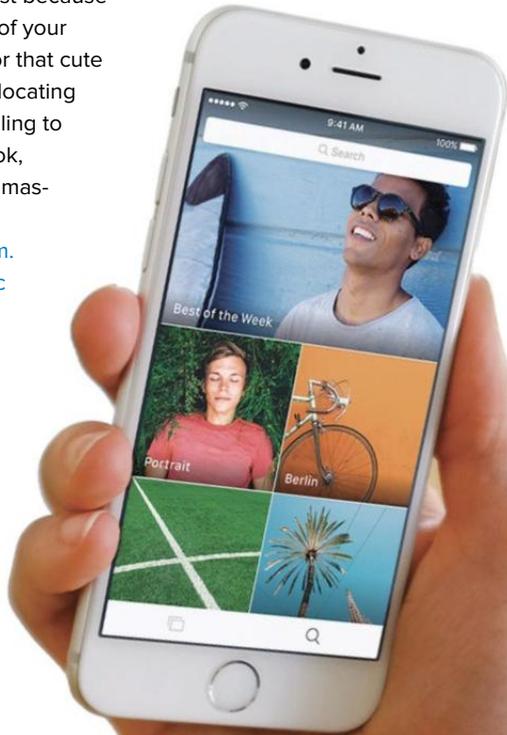
PHOTOGRAPHY

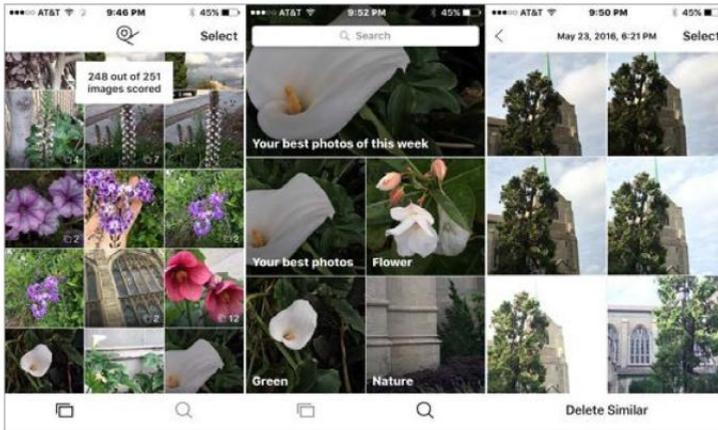
THE ROLL: iPHONE APP TAKES INTELLIGENT CHARGE OF YOUR CAMERA ROLL

BY JACKIE DOVE

ATTENTION iPHONE SHOOTERS: Just because you feel compelled to take 100 shots of your favorite local band's holiday concert or that cute duck family in the park doesn't mean locating the image you want or endlessly scrolling to find the best one to share on Facebook, Twitter, or Instagram won't give you a massive migraine. It will.

That's where The Roll (theroll.eyem.com), free on the iTunes Store (go.macworld.com/therollappstore), a new iPhone app from EyeEm, comes in. The Roll is designed to save you time and effort by automating the curation and organization of all the photos in your Camera Roll (The Roll—get it?), from scanning and tagging to quantitative quality ranking. The Roll offers a helping hand in deciding which ones to keep and ditch. The best photo, according to the app's proprietary algorithm, always lands on top of the stack of similar ones, each accompanied by an “aesthetic score” of between 0 and 100. That helps you





select which photos to share and which to lose.

The Roll works its magic with its proprietary image recognition technology, EyeEm Vision (go.macworld.com/eyeemvision), which automatically tags and scores your photos and organizes images by topic, location, and event. The algorithm, based on computer vision and trained by millions of images, recognizes not only content but mood and emotion, which it uses to generate keywords. Browse your collection by tapping on a tagged image collection or searching via keyword. At launch, the app recognizes and tags some 20,000 keywords. As the app continues to analyze additional photos, it promises to improve accuracy.

In addition to using artificial intelligence to generate keywords, the app records metadata regarding your shots such as aperture, ISO, shutter speed, and focal length, plus a tiny map pinpointing location.

Some users have voiced privacy concerns, and for good reason. For the app to do its job of tagging and rating, your images must touch base with EyeEm's server. While some users undoubtedly would prefer that analysis take place directly on the device, EyeEm vows that only small thumbnails are uploaded to its servers, where they are processed, and then promptly removed, and that transmission to and from the server goes via encrypted https protocol. EyeEm says no actual humans see your photo. The servers themselves were fairly speedy, with my Camera Roll of 250 new photos taking just over two minutes to process.

While the built-in iOS Photos app classifies your images according to

THE ROLL



AT A GLANCE

iPhone app uses AI to automatically create keywords and records metadata for your photos.

PROS

- Quickly organizes and tags your photos
- Lets you view the top photos straightaway
- Extensive keywording saves time

CONS

- Will not read images from albums other than the Camera Roll
- Does not explain or give specific criteria for ratings
- Not always spot-on in its image judgments
- Vague in certain keyword categories

PRICE

Free

COMPANY

EyeEm

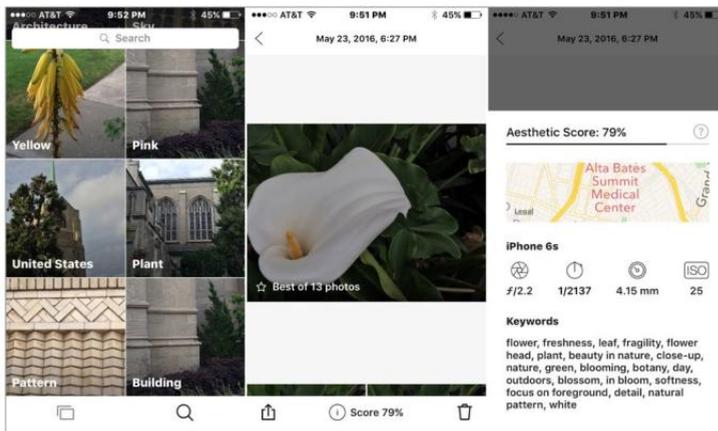
geolocation, date, and time, it eschews qualitative judgment on subjective quality issues like lighting, composition, focus, and subject. For most people, discerning the difference between nearly identical shots and scouring multiple shots on a small screen for fine details or color gradations remains a challenge.

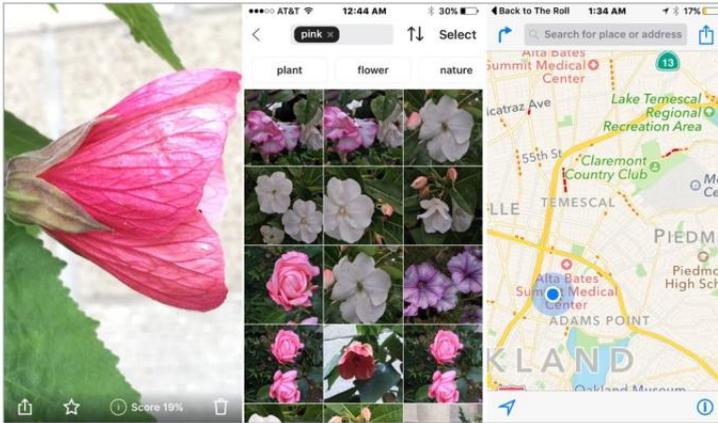
Overall, The Roll was helpful in either pointing me in the right direction or at the very least offering an alternative point of view. That said, I often disagreed with—or did not see the logic in—some of The Roll’s picks, and aside from the rating, there’s no hint of why or how the app came to its conclusion. It never divulges why some images carry a higher rating than others.

According to EyeEm, the methodology of ranking photos is generally a combination of artistic photography principles combined with its deep-learning technology, but there’s no explanation for specific individual photos.

With this debut, users should be aware of a few things. First, you must be connected to a Wi-Fi network to use The Roll.

Second, the app sees only images directly in the Camera Roll folder of the iPhone’s Photos app—not in other albums you may have stored on your iPhone. For example, I tried importing a batch of photos via iTunes into the camera app for a test, but The Roll would not recognize those photos, as they were not added to the Camera Roll, but to different albums.





The keyword function was strong overall, but while the keywords were abundant, they sometimes seemed vague. For example, a picture of my cat was tagged as “pet, animal, whisker, animal eye” and more. The one thing it did not list was “cat,” which is unfortunate because that would be my search term.

The Roll is free and available on the iOS app store. It works on the iPhone and iPad right now, but even with an up-to-date operating system, I found iPad operation buggy at best.

BOTTOM LINE

You have nothing to lose, and perhaps some insight to gain, in giving The Roll a try. It’s very easy to use; all you need to do is launch the app and it takes care of the rest. Its keywording skills are laudable, if not perfect, and that alone is worth the price of admission. As for choosing the best photos from your collection—that was sometimes hit or miss—but its third-party neutral perspective was nonetheless intriguing. As a brand-new release, The Roll’s debut is auspicious, but it still has a way to go to accomplish the goals to which its creators aspire. ■

What's new at the App Store



BOOM: MUSIC PLAYER

The free Boom: Music Player app (globaldelight.com/boomforios) for iOS promises to let you hear your tunes in highest-quality stereo, promising 3D Surround Sound, a 16-band equalizer, an “intensity slider,” and more. One warning: It only works for your downloaded music files, not streaming music.

Model 15



By far the most expensive app we're featuring, check out the \$30 Model 15 (go.macworld.com/model15app)—an electronic recreation of the beloved synthesizer that first appeared in 1973. (And a cheaper version at that: Hardware models reportedly cost \$10,000 or more.) Love some groovy old-school keyboard sounds? This is your app. Warning, though: Only 64-bit devices are supported.

Clawtar



Clawtar (\$6 for iPad; clawtar.info) is “a musical instrument and MIDI controller with an adaptive interface.” The interface is laid out with the keys and buttons placed where your hands might most naturally rest on the iPad screen, meaning it's not only musical but ergonomic, intended to let you play by touch instead of sight.

LikeSo



LikeSo (\$1, iPhone and iPad; sayit-likeso.com) helps improve your public speaking skills: Speak into your iOS device and the app calculates how often you use “filler” words—“um,” for example—and scores you accordingly. The goal? To prepare you for interviews, presentations, auditions, and more.

Sharply



Sharply (free, iPhone and iPad; sharplyapp.com) is a “personal brain trainer” that features more than 25 games—with more new games available each month—to help you stay, natch, sharp. —JOEL MATHIS

Protect Your iPad

This week's roundup of iPad cases features Toast's personalized wood cover, Twelve South's functional BookBook, a waxed canvas sleeve from Dodocase, and a messenger bag that comes with its own tracking number.

BY EMANUELA CORSO AND MARCO TABINI



TOAST

The Custom Cover (9.7-inch and 12.9-inch iPad Pro, all iPad Air and iPad mini models; \$69 to \$99; toastmade.com) is made from wood obtained from ecologically sustainable sources. The case grants full access to the iPad's buttons and ports, can be personalized with your own logo or favorite artwork, and is available in walnut, bamboo, ebony, or ash.

BRENTHAVEN

The Medina (all iPad models; \$100; brenthaven.com) is a messenger bag with plenty of room for your tablet and larger electronics. The bag sports a fashionable two-tone exterior with a genuine leather trim, a dedicated pocket for your iPad and your laptop, and a front panel for accessories that's secured by a magnetic closure. For extra peace of mind, each Medina bag comes with an individual tracking number that can be used to trace it back to its owner if it's lost or misplaced.



Protect Your iPad



TWELVE SOUTH

The just announced BookBook (9.7-inch and 12.9-inch iPad Pro, iPad Air 2 and iPad mini 4; \$100; twelvesouth.com) for the new 9.7-inch iPad Pro sports a vintage book design secured by dual zippers with bookmark-like leather pulls. Made with distressed leather, the case features two hardback sides lined with microfiber and a reinforced spine to absorb and dissipate impact from shock. The BookBook can be used to draw, type, and even Net surfing in standing mode and includes a convenient pocket inside its spine to store your Apple Pencil.

GRIFFIN

The Snapbook with Keyboard (9.7-inch iPad Pro and iPad Air 2; \$100 MSRP; griffintechnology.com) combines a folio-style case with a removable Bluetooth keyboard. It features a soft interior lining designed to prevent scratches and smudges, a sturdy TPU shell that should withstand drops from up to six feet, and raised edges to keep your screen safe when placed face-down on flat surfaces.





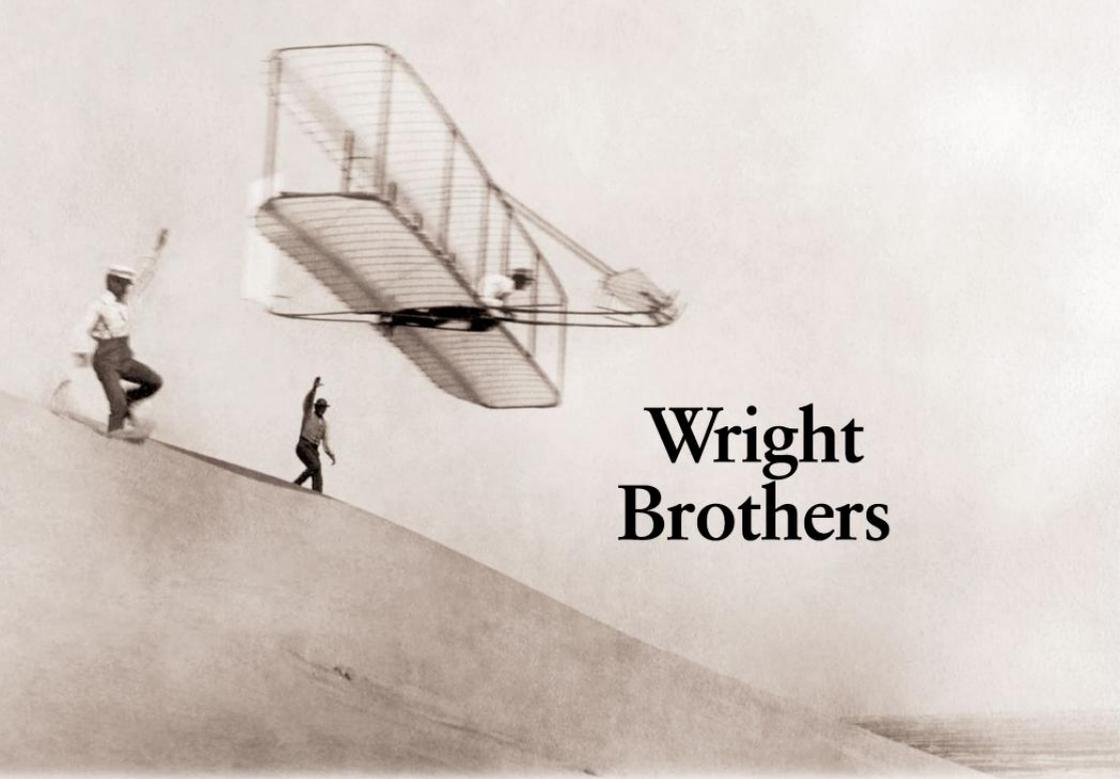
DODOCASE

The stylish Durable Sleeve (9.7-inch iPad Pro; \$69.95; dodocase.com) combines a waxed canvas exterior with a cotton twill interior. Designed to hold your iPad Pro with or without a Smart Keyboard, the sleeve features a three-layer construction with a leather tab closure, and comes in midnight, sage, or navy.

THINKGEEK

The Bag of Holding (all iPad models and iPad Pro; \$35; thinkgeek.com) features lots of pockets and compartments for everything you'll need when traveling—or for navigating a tech conference or fan convention. Its main attraction is a front pouch, whose hinged design and vinyl cover allow you to use your iPad without having to take it out of the bag. A complement of shoulder straps and handles give you plenty of carrying options, and special grommets between the various compartments make it possible to thread cables through for easy charging and tethering between devices.





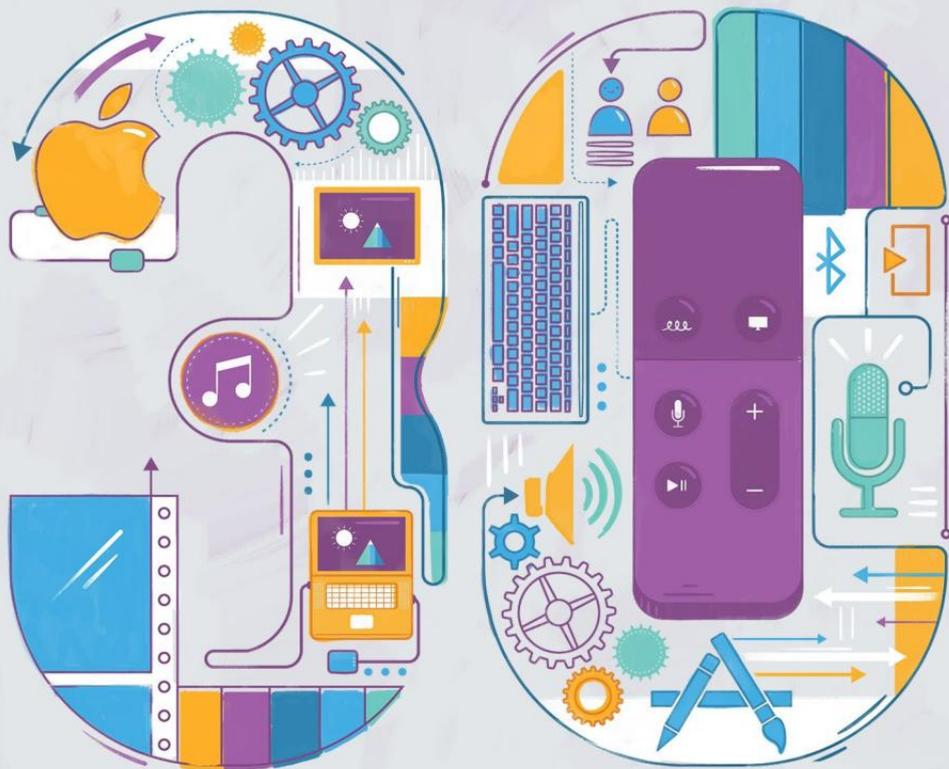
Wright Brothers

The right idea
will fly.

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MUST-KNOW SECRETS AND SHORTCUTS FOR YOUR APPLE TV

TIPS AND TRICKS TO GETTING THE MOST OUT OF APPLE'S FOURTH-GEN SET-TOP BOX. **BY CAITLIN MCGARRY**

ILLUSTRATION BY SHAW NIELSEN

APPLE TV SETTINGS, SIRI REMOTE TRICKS, AND MORE

After installing your favorite streaming apps (go.macworld.com/strm) and playing some of the games (go.macworld.com/atvgames) designed just for tvOS on your Apple TV, you're probably wondering what else this set-top box can do.

There are a slew of under-the-radar features that let you customize your TV to your heart's content and make it much easier to use. Apple just released tvOS 9.2, which baked a ton of functionality into the device (including some features from older TV models).

Here are 30 tips and tricks to make the most out of your fourth-generation Apple TV.





SIRI SEARCHES ACROSS APPS

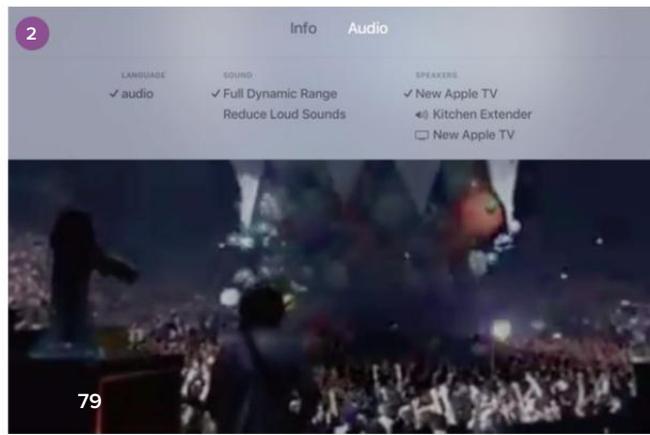
1 Searching for stuff to watch on your Apple TV just got a whole lot easier with the help of Siri. If you search for a movie or TV show from the home screen, Siri will search across several apps, including iTunes, Netflix, Hulu, Showtime, and HBO. If you open one of those apps and use voice search, Siri will show results just in that app. There are tons of tips and tricks to using the new Siri remote alone, so check out our list of Siri commands (go.macworld.com/atvsiri) and more touchpad remote shortcuts (go.macworld.com/atvremote).

If you need an assist or don't know what to ask, just press the microphone button on the remote and Siri

will offer a few prompts.

AUDIO OPTIONS

2 When you're playing a video, a quick swipe down on the trackpad reveals some audio options. Reduce Loud Sounds will attempt to smooth out jarring changes in



volume (handy for loud commercials in some TV streams), but Full Dynamic Range is the default. If the app you're using supports closed captioning or foreign language subtitles, you can control that here. You can also select different speakers, which is great if you have a receiver or soundbar that supports AirPlay, or even paired Bluetooth headphones if you don't want to wake the baby.

WHEN 'SWIPE DOWN' WON'T DISAPPEAR

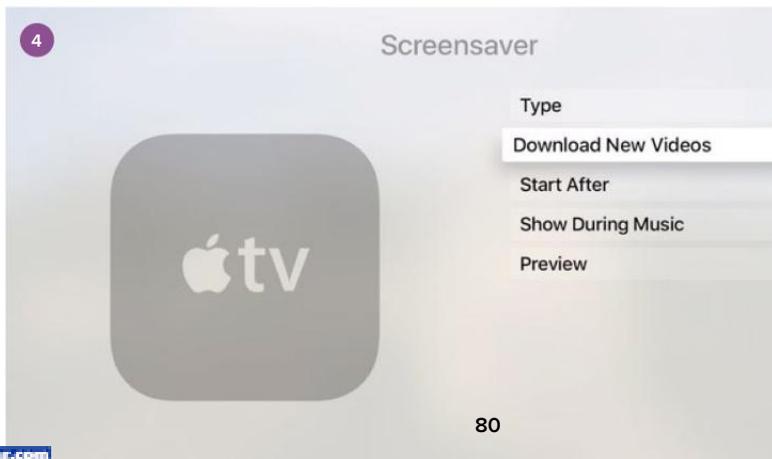
3 When you're watching a show or movie in an app like Hulu or YouTube, you can swipe down for more options as it plays. But if the Swipe Down For Info alert doesn't disappear after a few seconds, which happened to *Macworld's* Susie Ochs frequently in Hulu, either pause and restart the video to make it dis-



appear, or press Menu to go back one level and then restart the video.

NEW AERIAL SCREENSAVERS

4 If you love the Aerial screensaver, head to *Settings* → *General* → *Screensaver*, and with Aerial selected in the Type field, you can change the Download New Videos field from Monthly to Weekly



or even Daily. Just be aware new videos are downloaded in batches of about 600MB. You can't customize which views you're shown in Aerial, though—no restricting it to just your favorite city, for example.



CHOOSE YOUR OWN SCREENSAVER

5 You can use your own photos as screensavers instead of the stunning aerial options Apple pre-loaded on the TV. Open the Photos app on your TV and then select an album you want to use as the screensaver carousel. Tap the screensaver

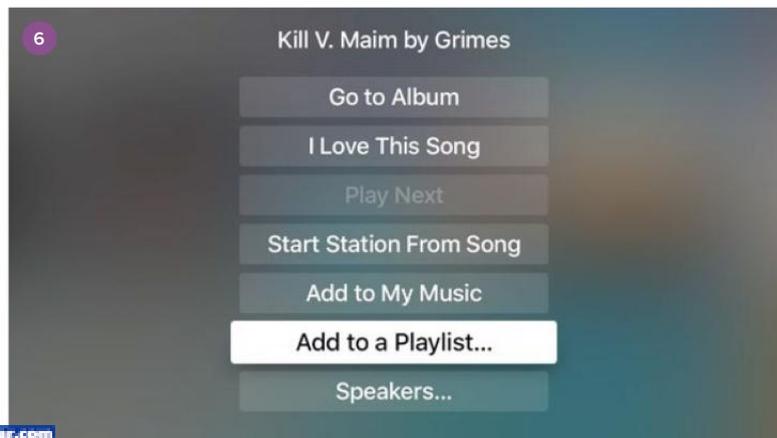
option to set that album as your screensaver. You can change up your screensaver at any time by going to *Settings* → *General* → *Screensaver* → *Screensaver Type*.

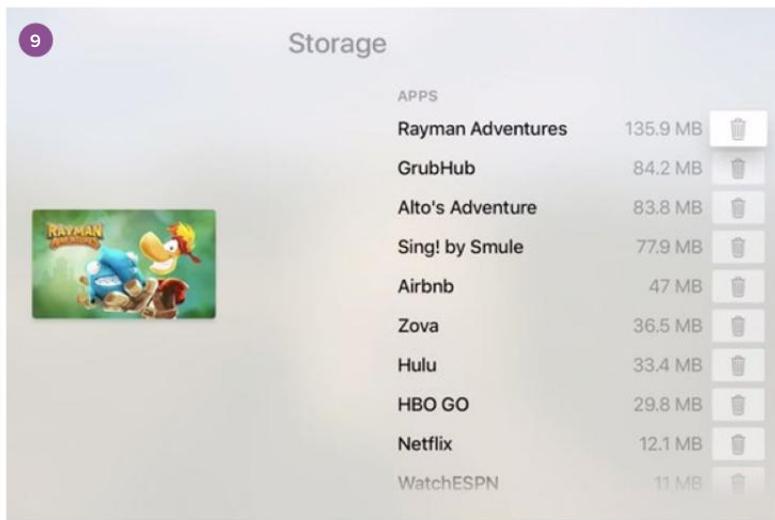
CREATE APPLE MUSIC PLAYLISTS

6 Apple Music subscribers can add to existing playlists or create new ones straight from the Apple TV. Pick a song to play, then use the touchpad to tap the More option (denoted with the ellipses) at the top of the Now Playing screen. Then tap Add To Playlist and pick one to add to, or select New and give your playlist a name. If all goes well, iCloud Music Library will sync the playlist across all your devices.

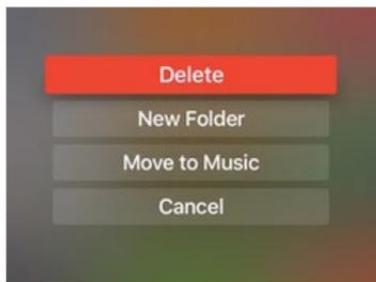
JUST LIKE THE IPHONE

7 Apple TV has an app switcher of its own—just double-tap the





TV button on your Siri remote. You can close apps by swiping up on the touchpad remote.



GET RID OF UNWANTED APPS

8 How to delete apps after installing them: Navigate over to the unwanted app and highlight it, then press down on the touch surface of your Siri remote until the

app jiggles, just like it would on an iOS device. Press the play/pause button on the remote, then tap Delete. As on iOS devices, you can't remove native tvOS apps that shipped with the device.

FREE UP STORAGE SPACE

9 The new Apple TV comes with 32GB or 64GB of space, depending on how much you spend. If you're an app-hoarder with a 32GB version, you'll need to keep a close eye on how much room you have left by tapping through *Settings* → *General* → *Manage storage*. You'll see a full list of apps stored on the TV and how much space they take up. You can delete the most egre-

gious space-hogs by highlighting and tapping the trash can icon next to each app, or you can delete apps directly from the home screen.

MOVE APPS AROUND THE HOME SCREEN

10 If you just want to move an app without deleting it, follow the same steps as you would to delete it: Highlight it and press down on the touch surface to make the app jiggle. Instead of hitting the play/pause button, just use the touchpad to swipe side to side or up/down and move the app around.

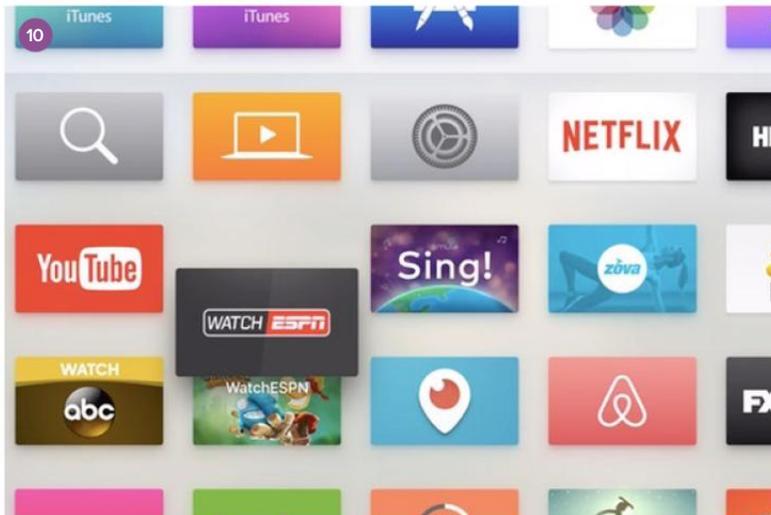
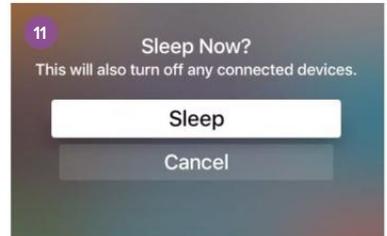
PUT THE TV TO BED

11 You can't power down the new Apple TV, but you can put it to

sleep. Just hold the home button, which will prompt the TV to ask if you also want to turn off devices connected to the TV—this means your television set. Press the home button once to turn it back on again. You can also put the TV in sleep mode by going to *Settings* → *Sleep Now*.

TWO TIPS TO RESTART

12 So you can't turn off your Apple TV, but you can reboot it if you need to by tapping through *Settings* → *System* → *Restart*. If that doesn't





work for some reason, hold down the menu and home buttons on the Siri remote at the same time, then let them go when your display starts flashing.

ADD MULTIPLE APPLE IDS TO YOUR TV

13 Multiple people can use the Apple TV in your house, and they don't have to load up your account with their purchases if you don't want them to. Associate multiple Apple IDs with your TV by adding a new Apple ID under *Settings* → *Accounts* → *iTunes And App Store*. After the new ID is added, your family members can switch to their accounts under *Settings* → *Accounts* → *iTunes And App Store*. If they install apps on the TV under their account,

those apps will remain on your home screen.



SKIP FORWARD, JUMP BACK

14 Siri can handle many of the little tasks you want to perform on your Apple TV, like fast-forwarding or rewinding content you're watching. But you can also skip back and forth through a movie or show using the Siri remote: Press the right side of the touchpad to skip 10 seconds

forward, and press the left side to skip back 10 seconds.



PAIR BLUETOOTH ACCESSORIES TO YOUR TV

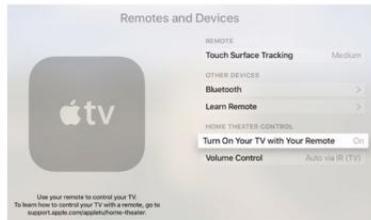
15 You can only pair one Siri remote to a fourth-gen Apple TV, but you can pair two additional Bluetooth accessories: Either two MFi Bluetooth game controllers, or one game controller and one Bluetooth audio accessory, like headphones or a speaker. Pair your accessories to the TV by tapping through *Settings* → *Remotes And Devices* → *Bluetooth* and selecting the device you want to pair.



FORGET BLUETOOTH DEVICES

16 If you want to swap out one of your paired Bluetooth accesso-

ries for another one, just unpair one under *Settings* → *Remotes And Devices* → *Bluetooth*. Pick the accessory you're done with, then select *Forget Device*.



USE THE APPLE TV REMOTE TO CONTROL YOUR DISPLAY

17 Turn your Siri remote into your main TV remote, or at least give it some extra functionality, by letting it control your TV power and volume. Let your Apple TV remote turn your TV on and off by tapping through *Settings* → *Remotes And Devices* → *Turn On Your TV With Your Remote*. To enable your Apple TV remote to control your TV's volume, select *Settings* → *Remotes And Devices* → *Volume Control*.

ACTIVATE VOICEOVER

18 The Siri remote offers an accessibility assist for people with low or impaired vision. Ask Siri to turn VoiceOver on, or navigate to *Settings* → *General* → *Accessibility* → *VoiceOver*. As you highlight text with



the touchpad remote, VoiceOver will read the text aloud. You can pause VoiceOver by tapping the touchpad once with two fingers. Tap twice with two fingers to resume VoiceOver. Check out more VoiceOver controls in Apple's TV support documents (go.macworld.com/atvsup).

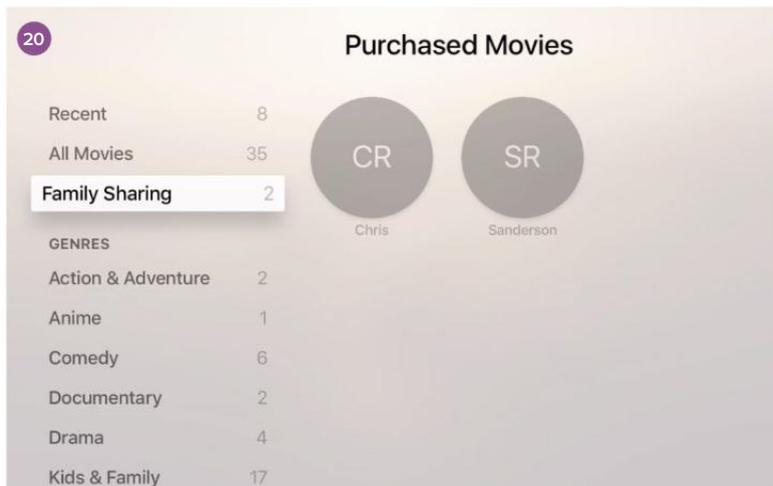
MAGNIFY YOUR SCREEN

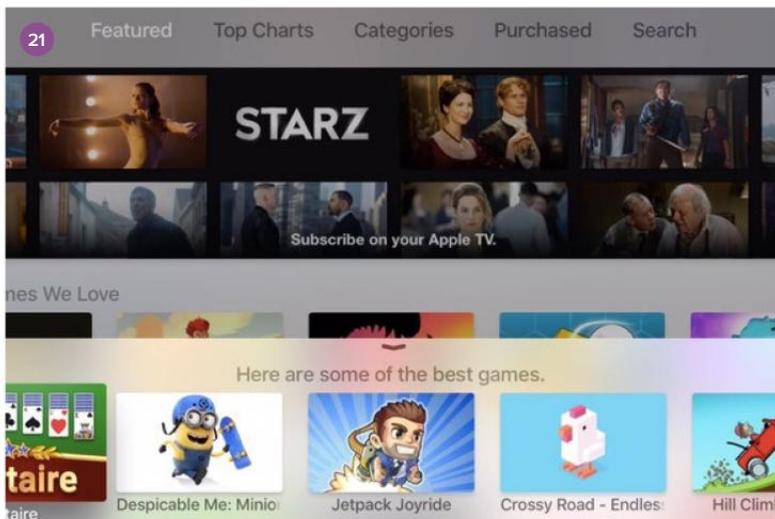
19 There are a slew of other accessibility options supported by the Siri remote. Turn on the Zoom

feature in *Settings* → *General* → *Accessibility* → *Zoom* to use the remote's touchpad to magnify Apple TV images, focus in on a particular area of the screen, pan across an image, or change the magnification of the screen. See all of the Zoom options here (go.macworld.com/atvzoom).

FAMILY SHARING

20 You can use Family Sharing on the Apple TV to watch movies or TV shows family members have purchased. Open iTunes, then select *Purchased* → *Family Sharing* and pick the name of family members from the menu bar. You have to use a Mac, iPhone, or iPad to set up Family Sharing (go.macworld.com/atvfam) before you get started on the TV.





USING SIRI TO FIND APPS

21 The fourth-gen Apple TV is the first to have a tvOS App Store, but when the hardware shipped, it was almost impossible to find apps. Apple has cleaned up App Store search by adding categories, but the real game-changer was adding Siri integration. Now you can search for a specific app by name without hunting and pecking to tap through letters on the remote. You don't even have to launch the App Store for Siri to start searching. Just say, "Hey Siri, search the App Store for Netflix."

You can also just ask Siri to recommend some titles for you. A search for **find good games** turned up Solitaire, Crossy Road, and Jetpack Joyride

(which I had never heard of but I'm now intrigued). You can also search by developer name, if you'd like.

SET UP BLUETOOTH KEYBOARD SUPPORT

22 What could be better than searching the App Store with your voice (and a little help from Siri)? Using a keyboard to type your query directly into the TV search bar. The Apple TV supports Bluetooth keyboards with tvOS 9.2, so make sure your TV is up-to-date and your key-



board discoverable. Then go to *Settings* → *Remotes And Devices* → *Bluetooth* and select the device you want to pair.

If you're using a Magic Keyboard (go.macworld.com/kb), there's a slew of shortcuts (go.macworld.com/atvsc) you can use with the new Apple TV:

- F3:** Switch apps
- F4:** Go to home screen
- F7:** Rewind
- F9:** Fast forward
- F8:** Play
- Spacebar:** Pause
- F11:** Decrease volume
- F12:** Increase volume

DICTATE TEXT WITH YOUR VOICE

23 Siri makes searching for apps or content within apps a lot easier, but entering text—like your Apple ID and password—is still a

pain. Instead of typing in those letters and numbers, let voice dictation do the work for you.

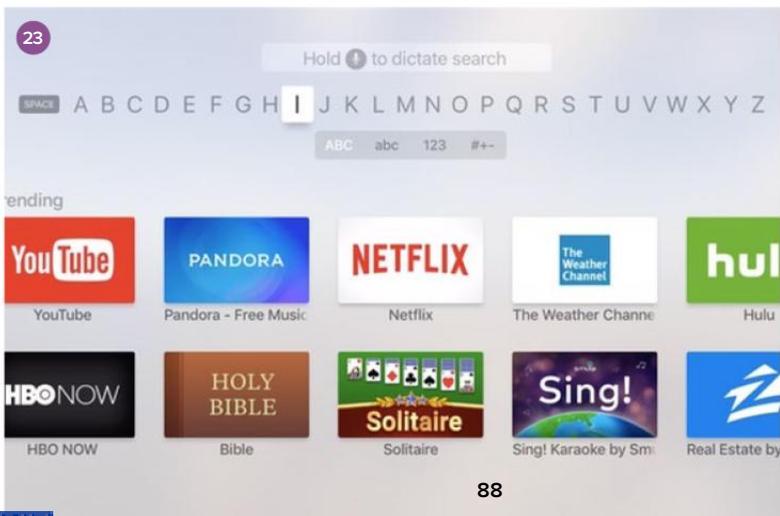
When a keyboard pops up on screen, press and hold the microphone and spell out your username or password. Apple's passwords are case-sensitive, so make sure to say "uppercase" when capitalizing a letter.

If you messed up, just say "clear" to erase all text.

A cool privacy note: Apple usually processes the information you relay through Siri And Dictation, but not with usernames and passwords you speak to your Apple TV.

WATCH LIVE CHANNELS

24 With Siri support, Apple added a U.S.-only feature called Live Tune-in, which lets you jump to live





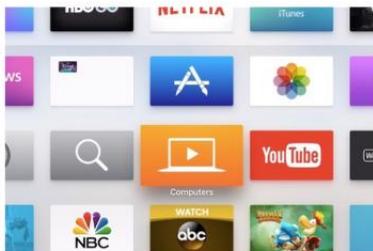
content in supported apps. Those apps are: CBS, CBS News, Disney Channel, Disney Jr., Disney Xd, ESPN, and FXNow. To access Live Tune-in, just hold the microphone button in one of the apps mentioned above and say, “Watch CBS live” (replace *CBS* with the name of the app you’re using), then release the microphone button.

SHARING PHOTOS FROM YOUR MAC TO YOUR TV

25 Flipping through a photo album on your Apple TV is a great party trick. Apple now supports Live Photos shot on an iPhone 6s or 6s Plus, too. But there’s a trick to getting photo albums from your Mac to show

up on your TV.

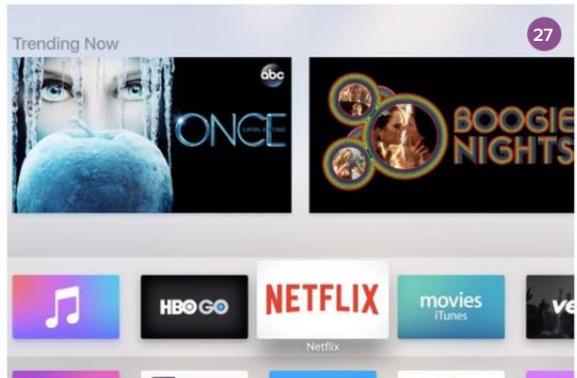
Open iTunes on your Mac, then click through *File* → *Home Sharing* → *Choose Photos To Share With Apple TV*. Select *Share Photos From*, then pick either *All Photos* or a specific folder you want to share. Then click *Apply*. Those photos will now appear in the *Computers* app on your TV, not the *Photos* app (a little confusing). But don’t worry, they’re there.



ORGANIZE YOUR HOME SCREEN WITH APP FOLDERS

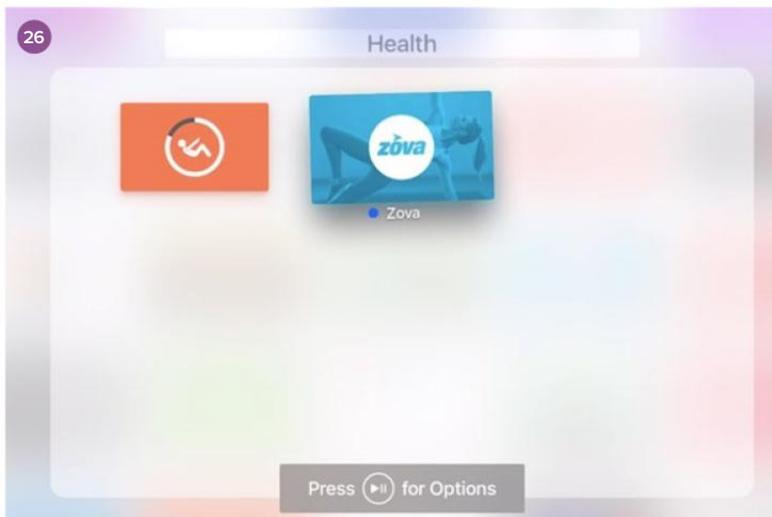
26 Take control of your Apple TV home screen (go macworld.com/atvhm) so it's as personalized as your iPhone by creating category-specific folders.

You can do this two ways: Press down on the touchpad until the apps start jiggling, then drag one app on top of the other so they'll expand to create a folder, similar to how apps on your iPhone and iPad home screen do. Or highlight an app, press and hold the touchpad until the icon starts to jiggle, then press the play/pause button and select New Folder. That will allow you to create a new folder and edit its name.



GIVE APPS TOP ROW PRIVILEGES

27 After you've made folders, decide which apps you use the most and move them to your top row. Apple has given Apple TV apps in the top row a special power: the





ability to preview content in those apps before opening them. For instance, highlight Netflix and see what shows and movies are trending now in the top bar, or highlight Music to see which albums you've recently added to My Music. Not every third-party app developer has built TV previews—looking at you, Vevo—but it's a great way to see the latest content without opening the app.

PAUSE VIDEO TO SWIPE

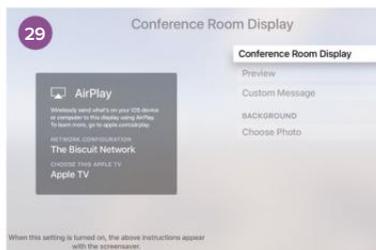
28 One of my favorite things about my Apple TV is the ability to swipe through content using the Siri remote touchpad. It makes it super easy to find specific scenes and jump around a show or movie whenever I

want. But tvOS 9.2 changed the way that swipe function works. Now, instead of just swiping as the video plays, you have to press pause to swipe. At first I thought Apple had ditched the swipe feature and I was beyond peeved, but don't worry: It still exists, just in a slightly less useful way.

AIRPLAY ON APPLE TV IS GREAT FOR GROUPS

29 The Apple TV is the focal point of your living room, but you can also use it for work. AirPlay makes the TV easier to use in both settings.

To use the TV as a conference room display so anyone can share their Mac or iOS screen to the device, just go to *Settings* → *AirPlay* → *Conference Room Display* and create a custom message



so that everyone in the room can see on-screen that the TV is in Conference Room Display mode. (You don't want to accidentally share your screen with the world.) You can choose a background photo if you want, then lock the TV in Conference Room Display mode with a 4-digit pin. This keeps anyone from using the TV as a, well, TV, without knowing the code. This feature was previously only available on older Apple TVs, but tvOS 9.2 brought it to the fourth-gen device.

You can also use AirPlay as a way to have friends beam content to your TV without giving them access to your Wi-Fi network, thanks to the peer-to-peer AirPlay functionality introduced in iOS 8.

USE YOUR IPHONE OR APPLE WATCH AS A REMOTE

30 The fourth-gen Apple TV wasn't the easiest to use when it launched last fall. Apple waited months to add robust Siri support, Bluetooth keyboard integration, and one of the

easiest ways of all to control the TV, the Remote app for iOS. We wondered: What gives (go.macworld.com/atvrem/)? It took a while, but the Remote app for iOS and the Apple Watch does now work with the new TV. How it works: Pair your phone and your TV by opening the Remote app and entering the 4-digit pin into your TV under *Settings* → *Remotes And Devices* → *Remote App*.

That's it! Now when you open your Remote app on the iPhone, its screen acts as a Siri remote touchpad. You can also set up the Remote app using Home Sharing—just select that option in the iOS app, then enter your Apple ID and password. It will find the other devices connected to your account that have Home Sharing turned on (so make sure you enable it on your TV if you're going that route).



To enable the Remote app on your Apple Watch, make sure it's paired to an iPhone that's on the same Wi-Fi network as your Apple TV. Open the watch Remote app, then tap Add Device. It'll give you a 4-digit pin. Enter that pin under *Settings* → *Remotes And Devices* on your TV. Then you can use your watch to swipe through options or pause/play content. ■

Thanks for leaving
your car here last night
and not ending my
family's lives.

Tara Inskip



SAVE A LIFE. DON'T DRIVE HOME BUZZED.
BUZZED DRIVING IS DRUNK DRIVING.



U.S. Department of
Transportation

HEADPHONES BUYERS GUIDE:

Which type delivers the best balance of great sound, isolation, and comfortable fit?

IN THE EAR, OVER THE EAR, OR ON THE EAR: WE EXAMINE THREE HEADPHONE TYPES AND NAME THE BEST FOR MUSIC LOVERS.

BY THEO NICOLAKIS



In-the-ear, on-the-ear, and over-the-ear headphones all sound different. They also have their respective benefits and drawbacks. We set out to explore which kind of cans provides the best mix of noise isolation, comfort, price/performance ratio, and sound quality with a wide range of music.





HARMAN PROVIDED a wide variety of headphones from its AKG, Harman/Kardon, and JBL brand portfolio.

ROUNDING THINGS UP

For this roundup, I focused on headphone models priced less than \$300. I then solicited some advice from Harman International's Director of Acoustic Research, Dr. Sean Olive (seanolive.blogspot.com), who is also a former president of the Audio Engineering Society (aes.org/aes/seanolive). Dr. Olive and his colleagues have been at the forefront of headphone research, and Harman provided a number of headphones for this evaluation.

After auditioning them, I settled on the JBL Reflect Mini in-ear monitors (IEMs), the AKG N60 NC (noise-can-

celling) on-ear headphones, and the JBL Everest Elite 700 over-the-ear headphones. I listened to each both at home and on the road to see how the different form factors performed in a variety of environmental conditions.

IN-EAR-MONITORS

In-ear-monitors fit into your ear with either a silicone or foam tip. As with most IEMs that I own or have tried, the JBLs were light and comfortable—to the point where I'd forget I was even wearing them. My biggest complaint with IEMs at this price point is that you get a smaller sound stage and concede some of the

JBL EVEREST ELITE 700 HEADPHONES

PRICE WHEN RATED
\$300

JBL REFLECT MINI IN-EAR HEADPHONES

PRICE WHEN RATED
\$55

AKG N60 NC ON-EAR HEADPHONES

PRICE WHEN RATED
\$250

dynamics, richness, and sweetness you'll typically get with on-ear or over-the-ear models. Bass can also be hit or miss.

Getting a tight seal with IEMs is very important because the bass response you'll get is dependent on that seal. If the seal is too loose, bass will sound anemic. While IEMs are great for orchestral, jazz, and even certain kinds of pop and rock, they wouldn't be my go-to phones for explosive bass or rich dynamic pieces.

Typically, IEMs come with different sized tips to provide the best fit with the unique shapes of your ears. The tips

help secure the IEM into your ear as well as block out ambient noise—sometimes to the tune of 25db or more.

While the JBL Reflect Mini (go.macworld.com/jblreflectmini) did a decent job of blocking out external noise, it wasn't a stellar performer. I therefore reached out to a third-party company, Comply, which manufactures replacement tips from memory-foam (complyfoam.com) for various brands of in-ear monitors. These promise to block out more external noise than the silicone tips that come with most IEMs. And they live up to that promise, in my experience. They were a noticeable

THE COMPLY REPLACEMENT

memory-foam tips made a dramatic difference in blocking ambient noise when paired with the JBL Reflect Mini in-ear monitors.



PHOTOGRAPH BY THEO NICOLAKIS



AKG'S N60
headphones fold for
easy travel

upgrade from what came in the package with the JBLs—especially in high-ambient-noise situations, such as inside airplanes and trains.

ON-EAR HEADPHONES

For me, on-ear headphones (also called supra-aural) can be hit or miss. Some models are too tight and others far too loose. While tight-fitting models can help block out external noise, they can become fatiguing and painful to wear for extended periods. The AKG N60s (go.macworld.com/akgn60ncamz), however, felt just right. They were super light and comfortable—even for very long

listening sessions.

Another advantage of on-ear headphones is that they give you close to the sound quality of over-the-ear headphones in a more compact form factor. In fact, many models, including the AKG N60, fold for travel.

Whether it was Adele's "Hello," U2's *Songs of Innocence*, or Holly Cole's *Best of*, the AKG N60s effortlessly reproduced just about any artist or genre I threw at them.

NOISE-CANCELLING HEADPHONES

On-ear-headphones tend to be at a disadvantage in noisy environments.

For that reason, some models, including the N60, feature active noise cancellation: They generate background noise that's roughly an inverse sound wave to the noise you want to eliminate.

Not all noise cancelling techniques are the same. Aimed at air travelers, the AKG N60's noise cancelling targets lower frequencies to cancel out most of the aircraft's engine noise. I can say from first-hand experience that the effect is quite impressive. In contrast, the JBL Everest Elite are focused on a broader commuting and at-home audience, so they employ a wider noise-cancellation spectrum.

While the effects might at first seem magical, there are definite drawbacks that I noticed immediately. First, enabling active noise cancelling on any headphone—not just the AKG N60 or JBL Everest Elite 700—created a noticeable pressure on my ears. While this sensation might not bother some, it certainly bothered me and reminded me why I've never liked noise-cancelling headphones.

Second, active noise cancelling effects the soundstage and (depending on the model) the musical presentation. For example, activating active noise cancellation immediately recessed the soundstage, making the overall presentation more relaxed. I found that it also thinned

out the music. The effect was far more noticeable (and bothersome to me) in quiet environments as opposed to noisy ones.

All in all, while I know many people love active noise-cancelling headphones, I much prefer a good seal (aka passive noise cancellation).



NOISE CANCELLATION isn't just for on-ear models. Some over the ear models, such as JBL's Everest Elite 700s feature active noise cancellation, too.

**OVER-THE-EAR**

headphones, such as those of the JBL Everest Elite 700 pictured here, typically feature plush, large ear cups that seal out ambient noise for a lower noise floor when listening to music.

OVER-THE-EAR HEADPHONES

Over the ear headphones (also known as circumaural or full-sized headphones) are an audiophile gold standard for good reason. This type of headphone fully covers your ear. Open-back designs let you hear your surroundings. Closed-back models help seal out ambient noise and prevent sound from leaking into the environment (and nearby microphones, if you're in a recording studio). Several times while I was wearing the JBL Everest Elite 700s (go.macworld.com/jbl700eliteamz), I was completely unaware that someone was speaking to me. I just didn't hear them. Circumaural headphones significantly lower the noise floor, allowing you to hear more details and get "deeper" into the music.

On a nearly 11-hour transatlantic flight I recently took, for example, I measured 94dB of cabin noise using a SPL (sound-pressure level meter). The JBL Reflect Minis (with the Comply memory-foam tips) and the JBL Everest Elite 700 did the best job of isolating my ears from that cabin noise. I preferred listening to music and movies, however, through the over-the-ear JBLs because of the superior overall sound quality.

Music comes from a wide, expansive soundstage with either open- or closed-back circumaurals. Instruments take on a larger, more lifelike feel. This was certainly the case with the JBL Everest Elite 700. Orchestral works in particular benefit, but so does R&B. The larger drivers in an over-the-ear headphone deliver a



better sensation of bass, too. Listening to Lorde’s “Royals,” for example, was a very different experience on the Everest Elite headphones compared to what I heard using the Reflect Mini ones. Generally speaking, over-the-ear headphones are better suited to for all kinds of music.

The biggest drawback of over-the-ear headphones is their size and bulk. Over long listening sessions with the JBL Everest, my ears became a bit hot and uncomfortable. For that reason, I preferred wearing the AKG N60s or Reflect Minis for long sessions.

MACWORLD RECOMMENDS

While they aren’t the best for travel or an active lifestyle, over-the-ear

headphones deliver the best balance of sound quality, noise isolation, and comfort. In-ear monitors deliver the best overall price/performance ratio, and they can be great for jogging or workout sessions. A good pair of on-ear headphones, which let your ears “breathe,” can be worn comfortably during long listening sessions, and models with active noise cancellation go a long way to making up for the reduced isolation those models typically provide.

Each type of headphone comes with its own pros and cons; and in an ideal world, we’d all be able to have all three types at our disposal. Everything else being equal, if your budget limits you to one type, we’d recommend circumaural cans over anything else. ■

OVER-THE-EAR headphones are typically far larger than on-ear models.

How to use one Mac in multiple rooms

A reader wants to have a single machine available with a monitor and keyboard in multiple, adjacent rooms.

BY GLENN FLEISHMAN



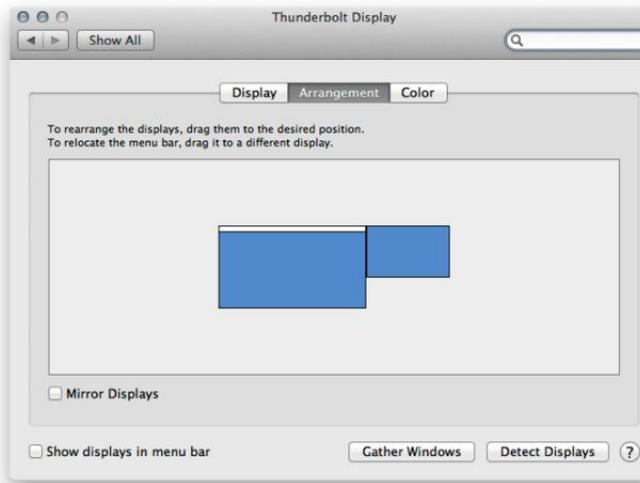
Jean-Francois Baril has a complicated problem to solve: He needs to have two monitors that mirror his iMac display, so that he can buy one iMac and use it in three different adjacent rooms (in a doctor's office).

Baril wonders if display mirroring would solve the problem.

Yes! Any iMac model with two Thunderbolt ports can support one monitor via each port (go.macworld.com/thunderboltfaq) using the DisplayPort video standard, which uses the same connector type and passes over the Thunderbolt standard.

You'll also need to think about what resolution displays you want to use. You can get a 21.5-inch iMac either standard 1080p resolution (1920x1080 pixels) or 4K (4096x2304 pixels), or the 27-inch iMac with 5K (5120x2880 pixels). The 21.5-inch models can handle two 1080p displays (or thereabouts), while the 5K iMac can support two 4K monitors.

Depending on how close the other rooms are and how much you can drill through a wall or run cords over a partition, you will probably need longer than a typical DisplayPort cable, which is normally about 6 feet (2 meters) or shorter. Affordable, longer DisplayPort cables can't carry



4K, which isn't an issue for any but the 27-inch iMac. But keep that in mind. Monoprice has a 15-foot Mini DisplayPort to HDMI cable (go.macworld.com/displayportcable) for \$16. (Most DisplayPort capable monitors will also have an HDMI port.)

If you need longer distances or want 4K from a 27-inch iMac, it's possible, but you'll spend several hundred dollars, as you have to leap to high-end ethernet style or fiber-optic cabling with converters.

Next, you can set up mirroring, so that both external displays mirror the internal one. Apple has detailed instructions (go.macworld.com/applemirror) about enabling mirroring and Option-dragging displays onto the main one. Because your external displays will be lower resolution, OS

THUNDERBOLT display settings.

X will figure out the lowest compatible dimensions among all the monitors connected.

Finally, you need keyboards and mice or trackpads. Bluetooth is your best bet, as most keyboards support a signal-strength flavor that carries about 30 or so feet (10 meters), reducing by walls and other obstacles. I'd make sure the keyboard and pointing device used with the main Mac is plugged in via USB, because Bluetooth can only support 7 devices at a time, and Apple recommends

(go.macworld.com/bluetoothmac) using only 3 or 4 at once.

Of course, with keyboards and displays in different rooms, you'll have to make sure that multiple people aren't trying to use the same computer at once. It's still just a single session you're working with mirrored across multiple displays. You could find yourself confused when you struggle to move the mouse pointer onscreen as it keeps getting dragged elsewhere. ■



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American Red Cross



5 ways to search Gmail that everyone should know about

Use Gmail's advanced search operators to find anything in your inbox.

BY MICHAEL ANSALDO

In a perfectly productive world, your inbox would have a place for every email with every email in its place. But it's easy to let messages stack up knowing Google's powerful search can usually bail you out when you need to find a months-old missive. Still, there will be cases when you need the help of an advanced search operator.

These terms can help you home in on what you're looking for more quickly and accurately than a simple search. There are dozens of operators you can use, but we've narrowed down five of the most handy.

1. USE 'IN:ANYWHERE' TO SEARCH EVERYWHERE

It's a given that a general Gmail search crawls every nook and cranny of your inbox, right? Alas, no. Search ignores Spam and Trash unless you specifically tell it to look there. That's important to know because even Gmail's spam filter is imperfect. And who hasn't accidentally consigned some important message to the trash when furiously trying to get to inbox zero?

If you have no idea where the

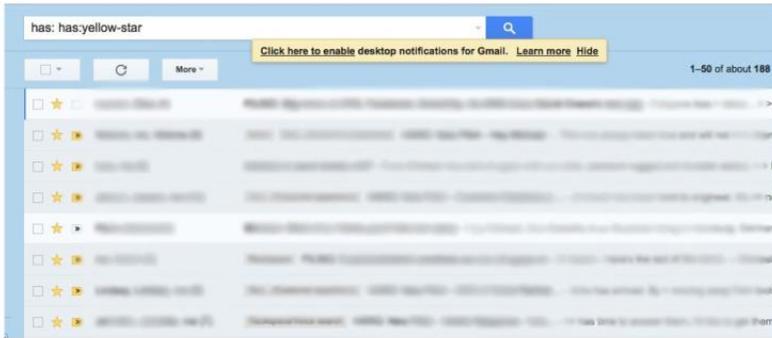
message you need is hiding, cast the widest net possible with the **in:anywhere** operator followed by a keyword. This should uncover your missing email, provided it hasn't been sitting in your trash or spam folder for more than 30 days, after which time Google will automatically delete it.

2. FIND ATTACHED FILES WITH 'FILENAME'

Your meeting is about to start and you still haven't found the Excel spreadsheet your colleague emailed you last week. There's no time to scroll through the hundreds of messages in your inbox looking for it—you needed it five minutes ago. Here, the **filename:** operator can



USE THE FILENAME: operator to search attachments by filename or type.



YOU CAN USE the **has:** operator to find messages marked with a particular colored star.

save your day.

Just pair it with any part of the file name—for example, if the file was called `fiscalQ3.xlsx` you can type **filename:fiscal** to search for any attachment with “fiscal” in the file name. You can also use this operator to search by file type if you don’t remember the filename. In this example, you’d type **filename:xlsx** to find any Excel attachments.

3. USE ‘BEFORE’ AND ‘AFTER’ TO SEARCH TIME PERIODS

Often you have a rough idea of when a message was received even if you can’t remember the exact date. That’s when to use this pair of operators.

You can use them individually to find a message that was sent before or after a specific date by typing **before:** or **after:**, respectively, followed by the date in the **yyyy/mm/dd** format. You can also use these

operators together to search within a window of time—

after:2016/02/15
before:2015/03/01, for example.

4. SEARCH BY STAR FOR IMPORTANT EMAILS

If you’re not already familiar with the full range of Gmail’s colored-star system (go.macworld.com/gmail-stars), it’s time to bone up. It not only offers an easy way to prioritize important messages without having to drag them to different folders or set up complex filters, it also makes them easier to search for later.

Using Gmail’s **has:** operator, you can search for messages tagged with a particular star. For example, **has:red-star**. This search is even more powerful when you pair it with the **from:** operator to find a starred message from a specific sender—type **has:red-star from:Frank** to find emails received from Frank that

you've marked with a red star.

5. DON'T FORGET TO CHECK CHAT

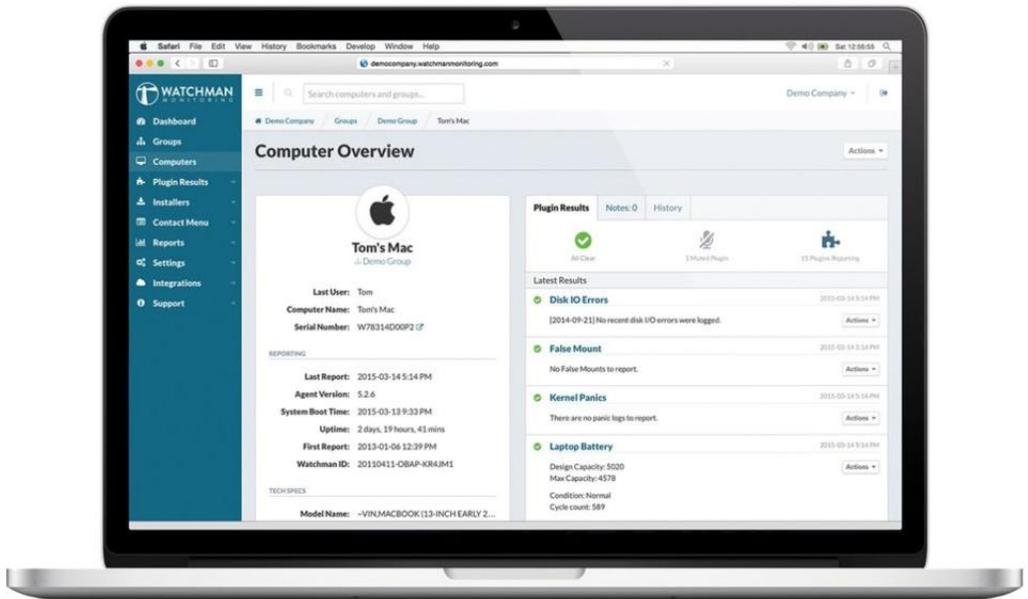
A lot of work communication takes place in Google Chat because of its real-time nature. Fortunately, your chat logs are stored in your Gmail

account and you can use advanced search to find important information buried in snippets of conversation. Just pair the **is:chat** operator with a keyword or the name of the person you chatted with—**is:chat Susan**, for example—to find what you need. ■

Eye in the sky asset management using Watchman Monitoring

Watchman Monitoring offers excellent options for consultants, enterprise and education IT managers to track and proactively monitor the computer assets they're responsible for.

BY JEFFERY BATTERSBY



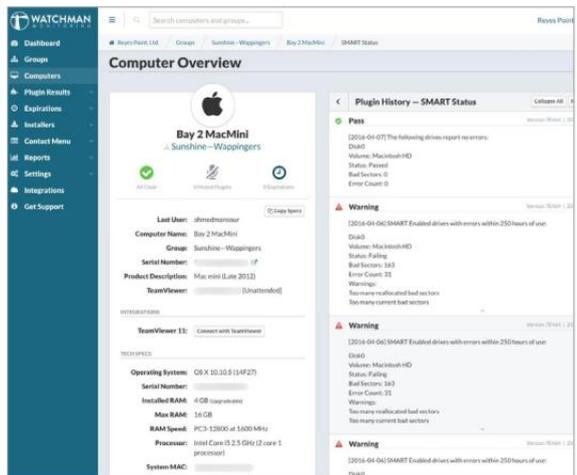
Asset management? Your first thoughts likely run to databases of devices. Fixed. Immutable. Manual entry. A pain to change and keep up-to-date. Maybe even a walking tour of your building(s) every year to make sure the numbers in your database match your numbers on the floor.

Fun times, yes?

For the last several weeks I've been testing the Watchman Monitoring service (watchmanmonitoring.com), a web-based tool that uses a System Preference installed on every computer you own or manage to help you inventory and keep track of your Mac, PC, and Linux assets. Watchman Monitoring not only automatically collects information on all your devices, it also provides proactive monitoring of those devices, warning you about critical issues before they become real problems. Watchman Monitoring offers excellent options for consultants, enterprise and education IT managers to track and proactively monitor the computer assets they're responsible for.

Watchman Monitoring is designed, and priced, for consultants, businesses, and educational institutions. Accounts start at \$249 per month for up to 1,500 computers. You can purchase more licenses in increments of 1,000 for \$100 more per month.

For smaller businesses, Watchman Monitoring expects you to use their



consultants network (go.macworld.com/watchmannetwork). Consultants can offer monitoring for far fewer computers and can also give you access to your own account so you can see and monitor your own computers.

[Full disclosure: My business is a member of the Watchman Monitoring consultants network.]

WHAT WATCHMAN MONITORING WATCHES

Watchman Monitoring does your

WATCHMAN MONITORING DOES your busywork by way of software installed on a client computer.

Computers				
	Computer Name	Group	Serial Number	Last Report
<input type="checkbox"/>	ADMIN-PC	Sunshine—Kingston		2016-05-03 4:05 PM
<input type="checkbox"/>	Bay 1 MacMini	Sunshine—Wappingers		2016-05-03 3:16 PM
<input type="checkbox"/>	Bay 2 MacMini	Sunshine—Wappingers		2016-05-03 3:16 PM
<input type="checkbox"/>	Bay 3 MacMini	Sunshine—Wappingers		2016-05-03 3:17 PM
<input type="checkbox"/>	Bay 4 MacMini	Sunshine—Wappingers		2016-05-03 3:19 PM
<input type="checkbox"/>	Chair 1	Sunshine—Kingston		2016-05-02 4:13 PM
<input type="checkbox"/>	Chair 2	Sunshine—Kingston		2016-05-02 4:10 PM

ONCE YOU'VE INSTALLED the software you have an instant inventory of all your computers.

busywork by way of software installed on a client computer—a System Preference on the Mac—that sends status updates, at an interval you specify, so you can keep your thumb on critical issues. What does Watchman deem critical? Computers that haven't checked in, devices that aren't backing up, hard drives about to fail, and a host of other issues (go.mac-world.com/wmwatchlist), including those related to third-party software products. When a problem arises, you and anyone else on a list of users you define, are notified by email of the issue at hand.

For Macs the service offers several installation options, including standard package installers, imaging installations, using Apple's Netinstall service or JAMF Software's Casper, and command-line scripts that can silently push an installation out using Apple Remote Desktop. This is also true of Linux and Windows installa-

tions, although as I was testing this the Windows version of the client was in a pre-version 1 state, which is to say that, while not technically a beta, it had limited features and wasn't quite up to speed with the Mac and Linux versions.

Once the Watchman software is installed, the device it's installed on registers with the Watchman service. You have the ability to add devices to groups, making it easy for you to organize devices by company, client, office, or floor. At present the service doesn't offer an option for subgroups, although I was able, through creative group naming, to organize devices into smaller device groups based on client and location. Once devices are added, it's dead simple to move devices to different groups or to merge one or more groups with each other.

SO, INVENTORY?

Once you've installed the software,

you have an instant inventory of all your computers. Select Computers from the Watchman dashboard and you'll see a complete list of all the devices with the Watchman software installed, sortable by computer name, group, serial number, or the last time it reported in.

To that end, if a computer fails to report in for a few days, you'll also get a message that the computer is missing. From this list you can export a CSV file that includes data from the four displayed columns or a complete report, which provides a detailed overview of all your devices, similar to Apple Remote Desktop's system overview report.

The devil, as they say, is in the detail and Watchman Monitoring offers a considerable quantity of detail. Select any computer in the list and you'll see a significant amount of information, including whether any malware was detected, whether disks experienced I/O errors or kernel panics, when the computer's last full POST was, and how much capacity the computer's hard drive has available.

You can also keep your own notes on specific devices and view historical information, including everything from OS updates to software version updates. Watchman Monitoring can also detect when you have remote

control software installed on a computer, such as TeamViewer, LogMeIn, and Bomgar, and automatically adds a link to the device's overview page, allowing you to remotely control the device.

While all of this is incredibly detailed and fantastically easy to use, Watchman Monitoring's killer feature is its proactive warning system, which detects errors early. The benefit of this feature was obvious within minutes of installing the plug-in. One of the computers I was testing was experiencing disk errors via the SMART warning system, which were not showing up in Disk Utility. There was a continuously increasing number of bad sectors on a hard disk. Which is to say that, over a 24-hour period the hard drive was reporting new sector errors. This proactive reporting allowed me to replace a hard drive before it failed, saving the test computer from unnecessary and prolonged downtime. ■



WATCHMAN MONITORING'S KILLER feature is its proactive warning system, which detects errors early.



How the Smart Connector could be key to an iPhone Pro

As each iPhone gets more powerful, Apple could turn the iPhone Plus into an iPhone Pro by adding one little port, a good dock, and a whole new world of expansion possibilities.

BY MICHAEL SIMON

Ports are the unsung heroes of Apple's biggest revolutions. We got USB with the iMac, FireWire and the 30-pin connector with the iPod, Lightning with the iPhone and iPad, and USB-C with the new MacBook. Whether the ports are fledgling or proprietary, Apple's biggest breakthroughs have often centered around a new way to connect and charge, and its latest one might be making a surprise appearance on the next iPhone.

A recent schematic leak (go.macworld.com/ip7schematicleak) seemingly provides some evidence for the inclusion of a Smart Connector on the next-generation iPhone Plus. Depending on which rumor (go.macworld.com/ip7smartcxttr) you want to believe, it appears that Apple is wrestling with the decision to christen the larger 5.5-inch iPhone with the same Pro status it bestowed on the iPad, complete with the addition of the magnetic Smart Connector. According to the drawing and a previous leaked photo, the port is located on the back of the device, rather than the edge like on the iPad Pro, which suggests Apple has something different in mind than just a tiny Smart Keyboard.

With the iPad Pro, the Smart Connector is the first step toward positioning the tablet as a laptop replacement, but its purpose on a potential iPhone Pro isn't quite so straightforward. And whether it happens this year or next, I think it's



a logical step for the continued growth and maturation of the iPhone.

BUILDING BLOCK

In its current form, the Smart Connector's intelligence basically boils down to its ease of use. Like the Microsoft Surface's Type Cover (go.macworld.com/mstypecover) that clearly inspired it, the Smart Connector is built specifically to work with the Smart Keyboard; just attach it to the magnetic connector and start typing,

APPLE'S SMART BATTERY Case doesn't have to be beautiful, since it removes every bit of friction involved in using other battery cases.

without dealing with, as Apple says, “cords, pairing, or plugs.” Other than that, it’s no smarter than using a Bluetooth keyboard.

But the potential of the Smart Connector is much greater than an attached keyboard. Like the switch to USB on the iMac or Lightning on the iPhone, Apple is making a somewhat complicated process just a little bit easier. Like every great thing Apple does, simplicity is key.

Take Apple’s often-maligned Smart Battery Case (go.macworld.com/applebatteryaserev). Uncharacteristically ugly and bulky, its beauty isn’t in its outer aesthetics but rather its inner elegance. Unlike other powered cases that require you to constantly monitor your levels, Apple’s solution seamlessly switches between the internal and external batteries until they’re both drained, keeping you constantly notified of each.

It could be that the Smart Battery Case is a precursor to the kind of functionality the Smart Connector will enable. A series of swappable add-on cases and modules would give the iPhone the customization users desire while still letting Apple control the experience. Things like camera controls and lenses, extra storage, and, of course, batteries could make the iPhone the first successful modular phone, while



giving 6 and 6s users a significant reason to upgrade.

GOING PRO

Along with cases, the positioning of the connector naturally lends itself to comfortable placement in a dock. While a series of kits might expand the functionality of the iPhone, a dock could allow Apple to use the Smart Connector to change the perception of the iPhone, much like it did with the iPad Pro. Assuming it’s part of a rebranding of the 5.5-inch model from Plus to Pro, it offers an opportunity to pivot from a powerful handset to a small next-generation mobile computer.

Despite a proliferation of third-party charging stands, Apple only offers a single, bare-bones iPhone

SLAP THE IPAD Pro in a sturdy charging dock and grab any handy Bluetooth keyboard ... kinda works like a computer. The iPhone Pro could do this, too.

Lightning Dock for \$49, and it took Logitech to create the Logi Base (go.macworld.com/logibase), an iPad Pro dock that uses the Smart Connector for charging. But with the iPad Pro, a keyboard makes the most sense, and while I'm quite sure Logitech is already prototyping an ultra-portable Smart Keyboard for the iPhone, I think Apple's plans are bigger than typing.

A Smart Dock could expand the iPhone's capability in ways that just aren't possible now. For example, a speaker dock could make the Hey Siri function rival the usefulness of Amazon's Echo. An audio dock could turn your iPhone into a Sonos-like sound system. And an Apple Watch-style magnetic inductive charging dock would take a little bit of friction out of having to charge your iPhone every night.

But the most intriguing potential for a Smart Dock is on the desktop. Apple's Pro devices are all linked by their ability to let you work faster and more efficiently, and a desktop charging dock that expands the iPhone to a larger screen or offers the ability to connect a hard drive would be a real game changer for the iPhone, expanding it far beyond its current capabilities.

On the iPad Pro, the Smart Connector might be little more than an easy way to connect a keyboard, but its potential is far greater. It could be the thing that turns the iPhone from smart to genius. ■

**A SPEAKER DOCK
COULD MAKE
THE 'HEY SIRI'
FUNCTION RIVAL
THE USEFULNESS
OF AMAZON'S
ECHO.**

Apple simplifies navigation with iTunes 12.4

The initial release of iTunes 12 came with a confusing interface. With the 12.4 update, Apple has thankfully made iTunes simpler to use.

BY KIRK McELHEARN



Unlimited
Bassnectar

\$9.99



Last Year Was
Complicated
Nick Jonas

\$10.99



Still Brazy (Deluxe)
YG

\$11.99



A / B
Kaleo

\$7.99



Wanderlust
Little Big Town

\$7.99



Why Are You OK
Band of Horses

\$9.99



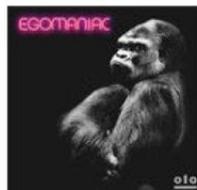
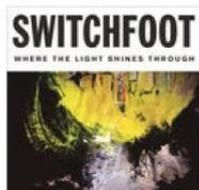
California Sunrise
Jon Pardi

\$9.99



Unleashed
Skillet

\$9.99

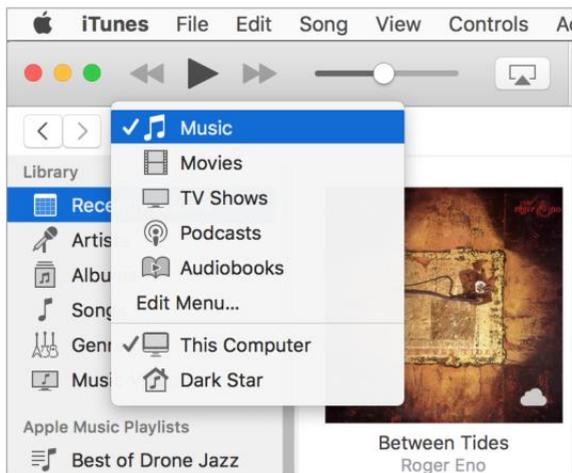


Apple recently released iTunes 12.4, simplifying some of the complex navigation features that have been criticized in this version of the media management app. Apple’s release notes for iTunes 12.4 say: “Now enjoy all of your music, movies, TV shows, podcasts, and more in a simpler design.” You can update iTunes through the App Store app on your Mac.

When I reviewed iTunes 12 back in late 2014, I said, “Overall, I find the navigation confusing—it requires too many clicks to get around.” I find the changes Apple has wrought to the interface of iTunes 12.4 to be both positive and intuitive, and I think all users will find these new ways of navigation to be more efficient, once they get used to them.

Navigating iTunes is now—or, again—centered on the sidebar and a single menu in the navigation bar. (You can show or hide the sidebar in the View menu.) Instead of a lot of confusing media kind buttons in the navigation bar, there is now a popup menu that Apple calls the Media Picker. Click it to choose a media library, edit the Media Picker menu, or mount another iTunes library with Home Sharing.

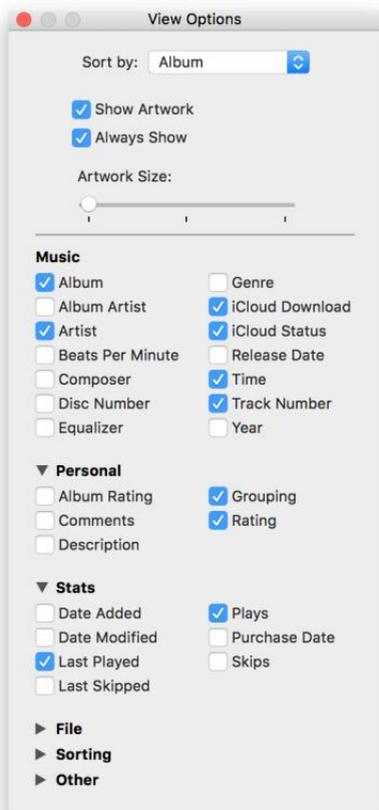
When you’ve selected a media library, you can then access its contents from the sidebar. Under the Library header, you’ll see a number of ways to access your media. For example, when the Music library is



selected, you see, by default, Recently Added, Artists, Albums, Songs, Genres, and Music Videos. If you right-click anywhere in this section and choose Edit List, you can add Composers and Compilations, or remove any of the view options if you prefer. Click Done, or click anywhere else in the sidebar to save your changes.

It makes more sense to have a sidebar entry for Recently Added

CHOOSE A MEDIA
library from this
pop-up menu.



THE VIEW OPTIONS window is back; it's now much easier to choose which columns you want to view, and more.

than to pile this content up at the top of the various views, as it was before. But I do not see any way to change the scope of this selection (weeks, months, etc.).

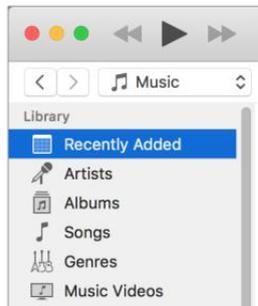
Also gone is the View Options menu, which was previously at the top right of the iTunes window. To change

view options—such as how your content is sorted, whether artwork displays, and which columns are visible in list views—choose **View** → **View Options**, or press **Command-J**.

It's interesting that iTunes now gives you more options for artwork size; in non-list views, you can choose from five sizes, up from three previously.

Another confusing interface element that has been improved is the **Back** and **Forward** buttons at the top left of the iTunes window. In iTunes 12.3, these buttons only displayed when you viewed the iTunes Store, and only affected navigation in the store. Now, they affect all your actions in iTunes: whether in your own library, Apple Music, or the iTunes Store. (There are also keyboard shortcuts for these buttons: **Command-[** and **Command-]**.)

Apple has thankfully merged the two different types of contextual menus, in most locations. Instead of one menu displaying when you click the ... button, and another when you right-click an item, the menus are the same, and work in the same way. I never understood why Apple wanted these two menus to be different, but



THE SIDEBAR IS back, and it's your control center for accessing your iTunes content.

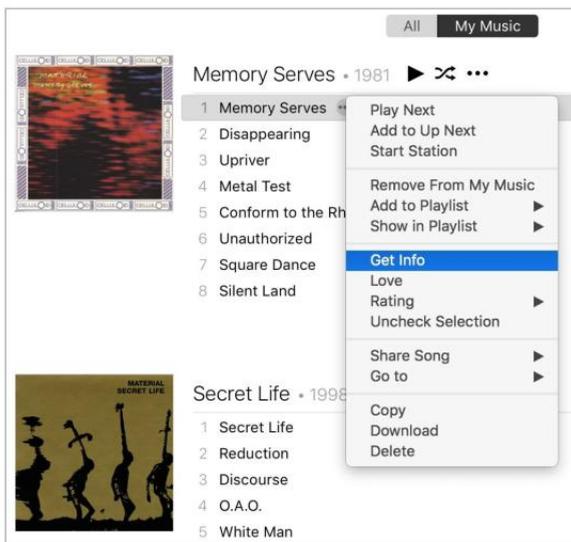
it's good that it's realized how confusing they were.

Unfortunately, there are some locations where the “new” contextual menu exists; click the ... button next to an artist or album name, and the new menu is still there. There's also a new Song menu in the

menu bar, which reproduces the menu items from the contextual menu.

The iTunes LCD—the display section at the top of the window—has been simplified, removing the Up Next button (it's now to the right of the iTunes LCD), bringing back the repeat button (why had that ever been removed?), and adding a visible ♥ button. You could ♥ a track previously by hovering the cursor over the iTunes LCD, clicking the ... button, and then clicking ♥. See how much of an improvement this is?

One change that's a bit surprising is the removal of the buttons below the sidebar that let you create a new playlist or smart playlist. These



functions are now in the File → New menu, as is Genius. There is no longer a way to start Genius from the contextual menu, and no more Genius suggestions; now, you select an item, and choose File → New → Genius Playlist. This is a bit obscure; could it be a hint that the Genius feature will be deprecated? (Genius also hasn't been working well for a while; even for many popular songs, it is unable to create playlists.)

There are still some elements of iTunes that need a refresh. Apple Music Connect is still present, even though Apple has hinted that it would be removed. You still cannot get from the iTunes Store to Apple Music; if you want to stream a track you see in

NOW, IN MOST of iTunes, there's just one type of contextual menu.



PODCAST
go.macworld.com/podcast508
to listen to our weekly podcast about the new iTunes 12.4



EVEN THE iTUNES LCD has been simplified.

the former, you have to manually search for it in the latter. But this may change when Apple Music is refreshed, most likely in June.

This update addresses many of the criticisms I've had regarding iTunes 12 since its inception. Bringing back the sidebar, simplifying the navigation of media libraries and views, and the Back and Forward buttons help make

iTunes simpler and more intuitive. The playlist functions are a bit hidden, and it would be nice to see color again in the sidebar, but the changes in iTunes 12.4 make this app more usable.

There are a lot of little changes I've spotted in the latest version of iTunes that aren't discussed here. Learn more about those changes (go.macworld.com/itunes124chgs). ■

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Use keyboard shortcuts to better navigate iTunes 12.4

It's quicker and easier to get around the app and control it from the keyboard.

BY KIRK McELHEARN

Apple released iTunes 12.4, changing a number of interface elements users had become familiar with for navigating their iTunes libraries. There are fewer buttons, and the interface is less cluttered (at least that's my opinion) but some users are lamenting the loss of some of these buttons and menus, which allowed them to move around iTunes with just a few clicks.

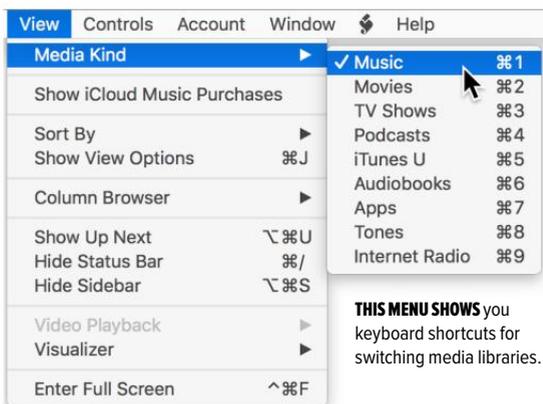
It's true that, for some features, you now need to click a bit more. For example, there was previously a row of icons near the top left of the iTunes window. These icons let you change media libraries, going from Music to Movies, or TV Shows to Audiobooks. But now, there's a menu that Apple calls the Media Picker; you need to click that menu to choose a media library.

Actually, there's another, quicker way to switch media libraries. You can do this from the keyboard. And there are lots of other keyboard shortcuts you can use in iTunes to save time. Here's an overview of the most useful ones.

CHANGE MEDIA LIBRARIES

In addition to using the Media Picker, you can also access media libraries from the View menu. Choose View → Media Kind, and you'll see a sub-menu with all of the libraries.

To switch to your Music library, press Command-1. For your podcasts, it's Command-4. And so on. Remem-



THIS MENU SHOWS you keyboard shortcuts for switching media libraries.

ber these shortcuts, and you'll save a lot of time.

CREATE NEW PLAYLISTS

There used to be buttons at the bottom left of the iTunes window, which you could click to create playlists and playlist folders. They're gone now. You can right-click in the sidebar and display a contextual menu which offers these options, but only at specific locations: at the header that says Music Playlists or All Playlists, or below the playlists. If you

have a lot of playlists, you have to scroll to the bottom of the list, and the target is quite small.

Use the keyboard. As you can see in the File → New menu, there are shortcuts for New Playlist, Playlist From Selection, Smart Playlist, but not Playlist Folder.

You can use keyboard shortcuts to create new playlists, and you can even set up your own shortcut using this method (go.macworld.com/osxshortcuts) if you create playlist folders often.

GO BACK AND GO FORWARD

iTunes 12.4 has Back and Forward buttons, similar to those you find in a web browser. You can use these to move around iTunes. For example, if you're in your music library and you then go to the iTunes Store to look for a new album by your favorite band, you may want to go back to check what's in your library. You can click the Back button, look at the band's music, then click the Forward button to go to the iTunes Store again.

But you don't need to use these buttons. You can press Command-[to go back, and Command-] to go forward.

RATE SONGS

It takes a few clicks to rate songs in iTunes. You have to select a song and right click, or click the ... button

next to a song, then choose Rating, and then choose a star rating. (In Songs or Albums views, you can hover your cursor over a track and click one of five dots that displays.)

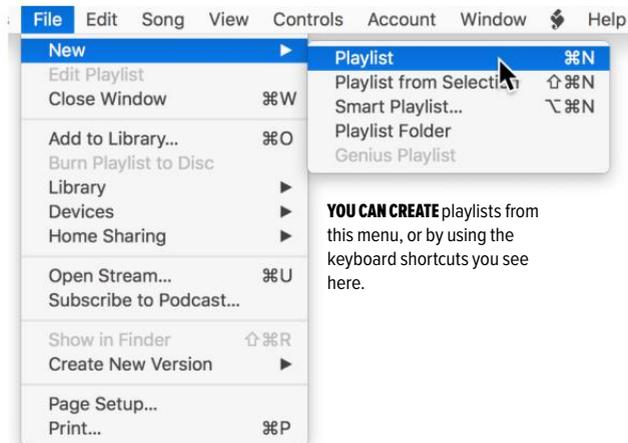
But you can also do this from the keyboard. While there are some third-party iTunes controllers that offer this feature, you can set up keyboard shortcuts in System Preferences that use the ★ characters in the Rating menu. See this article (go.macworld.com/rateitunes-tracks) to find out how to do this.

You can set ratings from None to ★★★★★ from the keyboard with this method.

MORE CONTROLS

There are other controls you can access from the keyboard.

- > Press the spacebar to play and



pause your music and videos.

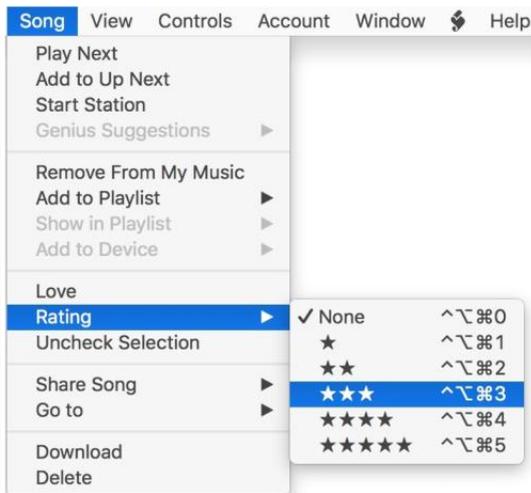
> Command–up arrow and Command–down arrow turns the volume up and down.

> Command–right arrow goes to the next track in an album or playlist, and Command–left arrow goes to the previous track. Note that if you're further into a track than a few seconds, Command–left arrow takes you to the beginning of the track; press it again to go to the previous track.

> Command-period stops whatever is playing and clears the iTunes LCD.

> Command-L goes to the currently playing song. (My favorite iTunes shortcut.)

If you're not used to using keyboard shortcuts with iTunes, take some time to learn some of these.



CREATE YOUR OWN shortcuts to rate your music from the keyboard.

It's quicker and easier to get around the app and control it from the keyboard. ■

How to trip out with the iTunes visualizer

Answers to your questions about Apple's media app.

BY KIRK McELHEARN



Since its very first version, iTunes has had a visualizer, a built-in light show that you can use to play trippy animations while you listen to music. (Grateful Dead music not required.) You may not have ever used it, or even known it's there, but it's a lot of fun to turn on while listening to music, if you're not working on your Mac (or if you just want to take a break). Altered states might make it even more interesting, but it's a great way to have some captivating visuals when you're just hanging out with friends listening to your favorite tunes. Here's how it works.

TURN ON THE LIGHTS

A quick press of two keys triggers the visualizer: while listening to music, just press Command-T, and sit back and watch the show.

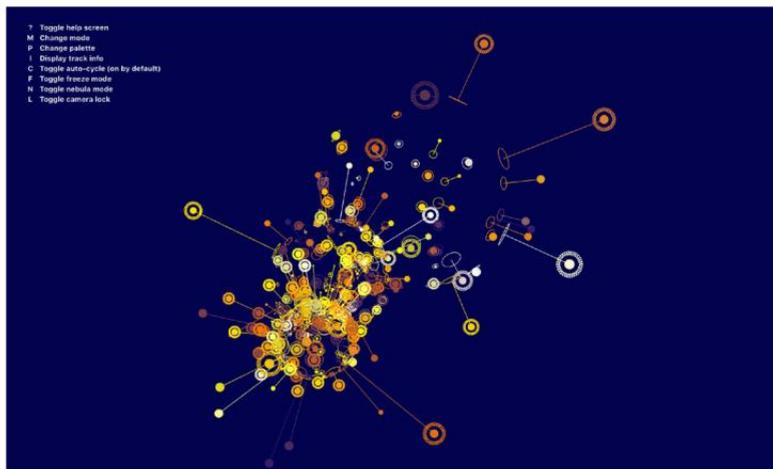
As you can see in the screenshot below, the visualizer displays the name of the track and album, its artist, and its artwork, at the bottom

left corner of the window for a few seconds. That way, you can always glance at your display when a new track starts playing to see what it is.

If you want the visualizer to fill your display, choose View → Enter Full Screen, or press Command-Control-F. When you've had enough of your show, press Command-T to stop it.



**START YOUR
iTunes** light show
by pressing
Command-T.



THE VISUALIZER
DISPLAYS keyboard shortcuts for its settings when you press the ? key.

If that's all the visualizer did, it would be pretty cool, but it gets a lot better. If you choose View → Visualizer, you'll see that you can choose from several different plug-ins. There's also a Play Videos setting. Select this if you're playing music from a playlist that contains music videos, and you want iTunes to play the videos when it gets to them, rather than use the visualizer.

TWEAKING THE VISUALIZER

The more changes there are in the music, the livelier the visualizer will be. You'll see that percussive songs lead to a lot of effects, but the visualizer also adapts to mellow music to provide a constantly changing palette of colors and shapes. (To be fair, I find it a bit too busy for ambient music, where the lights

should be more relaxing. But read on to learn how you can change that.)

Try with different songs and see how the visualizer changes. By default, it uses a random setting that cycles through a number of presets. But you can change the visualizer's settings too. Press ? (the question mark symbol) to see your options. Here are the options for the iTunes visualizer.

- > The M key changes the mode, which is the overall set of shapes that the visualizer uses.
- > Pressing P changes the palette, or the color scheme of the visualizer.
- > The I key displays track info at the bottom left of the screen; this is what you see in the first screenshot, showing the track name, album, artist, and artwork. It fades away after a while.
- > Press C to toggle the auto-

cycle. This is on by default, and this tells the visualizer to change mode and palette at random. If you find a mode and palette you like, press C to keep that combination.

> The F key toggles freeze mode. If you see a visual you like, press F to freeze it so you can take a screenshot. This doesn't freeze the display entirely, but it greatly reduces the movement, telling the visualizer to rotate but not dance around the display. This is a lot better for ambient music, which, as I mentioned above, dances too much with the default settings.

> Press N to toggle nebula mode (though some modes don't display nebulae). This adds iridescent clouds to the display. If you press E while in this mode, the clouds are enhanced.

> The L key toggles camera mode. This locks the visuals to more or less the same position on the screen. Pressing F and L (not at the same time) gives you an idea of how these two settings are related. When both are engaged, there is very little movement.

The following keys aren't shown on the Help screen:

> The A and S keys add or subtract rays in the current mode.

> The + and – keys increase or decrease the brightness of the rays.

> The R key resets rays and their brightness to their defaults.

Note that you can pause and resume playback while the visualizer is active by pressing the spacebar, and you can skip tracks by pressing the right-arrow (next) or left-arrow (back) keys.

You can choose from other visualizers by selecting one in the View → Visualizer menu. The settings available for each visualizer are different. For the iTunes Classic Visualizer, see this article (go.macworld.com/visualizersecrets). It's a lot less interesting than the newer iTunes visualizer.

You can make lots of interesting desktop backgrounds using the visualizer. Just press Command-Shift-3 to take a picture of the screen at any time; it will be saved on the desktop. Open System Preferences, click Desktop & Screen Saver, then Desktop. Drag an image to the well near the top of the window to use it as your wallpaper. ■

Ask the iTunes Guy

Have questions of your own for the iTunes Guy? Email itunesguy@macworld.com for his consideration.

Mac 911

Solutions to your most vexing Mac problems.

BY GLENN FLEISHMAN



How to export a Live Photos movie into OS X

Q: As I understand it, a Live Photos image has a .jpg file and a .mov file: the still JPEG shown normally and the MOV file “activated” when viewing the live portion (either on the iPhone 6s or in photos).

— Sarah Kruberg

A: She took a number of Live Photos on a trip, but discovered after importing them and deleting them she couldn’t figure out how to get access to the movie files.



AT LEFT, THE Live Photos label on an image; at right, the Info palette's petite indicator.



Apple makes it both easy and opaque. When you import a Live Photo into Photos for OS X, the app tags it: you can see the Live Photos icon in the lower left corner of a full preview of the image alongside the text label Live, and the icon also appears if you view information about the photo (Windows → Info). Hover over the Live label when viewing the full photo, and it plays the associated movie.

However, Photos doesn't give any indication a .mov file exists. The Info palette only says it's a JPEG; if you select File → Export → Export [X] Photo(s), it exports a JPEG. It's only when you Option-drag an image into the Finder or select File → Export → Export Unmodified Original For [X] Photo(s) are both the unmodified JPEG and the associated MOV retrieved.

You can also use the Image Capture app with an iPhone connected via USB, select the iPhone, choose Live Photos images, and then import them, and both the JPEG and MOV for each image are transferred.

iCloud.com only shows the JPEG

version; there's way no way to view a Live Photo or export a MOV, but it does retain those files and sync them among iOS and OS X.

How to exclude your iCloud Photo Library from an iTunes backup

Q: According to Apple Support (go.macworld.com/iclouditunesbackup), an iTunes backup of an iOS device with iCloud Photo Library enabled should not include photos from iCloud Photo Library. However, I'm currently experiencing that iTunes does indeed include all photos—something that I register from the size of the device backup in iTunes.

— Jan Dong-Hyun Dyrvig

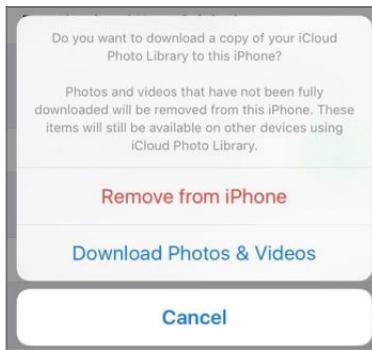
A: Jan wonders how to prevent this from happening. I don't experience this myself, and I've checked around the usual forums and can find only a couple of other people reporting the same—and no solutions they've found. You can try Apple's direct

iCloud support (getsupport.apple.com), as this seems related to an iCloud feature, or you can try resetting your iCloud status.

Jan has iOS set to keep full-resolution images stored, which means that disabling iCloud Photo Library won't cause a problem in which only low-resolution (optimized) images are stored.

1. In Settings → iCloud, tap Photos.
2. Tap the iCloud Photo Library switch to off.
3. When prompted, you can opt to tap Download Photos & Videos to ensure that all iCloud Photo Library media gets stored in iOS.
4. You should be able to now set iTunes to separately sync all the photos on your devices to iPhoto or Photos.
5. Perform an iTunes backup of the device, and check the size. It should now be smaller by the size of your iOS Photo Library.
6. Re-enable iCloud Photo Library and wait until everything is done syncing, which can take a while. iCloud shouldn't duplicate or re-upload any images.
7. Now perform an iTunes backup.

If all has gone well, your iTunes backup should now be the correct size and exclude images.



WHEN DISABLING iCloud Photo Library, you can retrieve full-resolution media or delete them.

Should two-factor authentication let me verify via a single device?

Allen thinks something is off with Apple's two-factor authentication (2FA; go.macworld.com/apple2factor) system which is a replacement for its older two-step verification system. He's verified his MacBook and his iPhone, but notes that when he logs in via a browser to the Apple ID site or iCloud.com using his MacBook...

Q: ...my MacBook will display a map with the option to select Don't Allow or Allow. When I select Allow, I then get a pop-up with my verification code. Using this verification code, I'm able to log in with no issue. The issue here, however, is that I'm logging in with my MacBook but also getting my verification code on the same MacBook. Is this how it's supposed to work?

— Allen

A: He sees the same map and code on his iPhone, if it's turned on. It seems a little counter-intuitive I agree, and it's a reason that some security experts don't label Apple's 2FA as "real" 2FA, but think it's still just a two-step process. True 2FA comprises two of the following things: something you know, something you have, or something you are. Mostly typically, that's a password, a phone or token-generating device, or a fingerprint. (It can also be a PIN, an RFID card that's tapped against a reader, or your retina.)

The first factor is typically the password or PIN, which you know and anyone can enter from anywhere, making it globally insecure.



The second factor for most consumer and small-business purposes is a code that's generated and sent through a means that's separate from the pathway that you're using to enter the password. That prevents someone who can gain access to the password also gaining access to the code.

When you log in to Dropbox, Facebook, or Google, you can use

either a Time-based One-Time Password (TOTP), in the form of a short code texted via SMS or generated via an authentication app, like Authy or Google Authenticator. To make it a true second factor, you shouldn't be able to receive or generate the code on the same



SO, IS THIS a good idea?

device on which you're logging in. In many cases, the same device is used, which reduces security.

However, someone has to gain access to something, like your incoming SMS messages or your actual phone, which dramatically reduces the odds of any arbitrary person with your password also gaining access to an account. So it's still very useful.

Apple skews even further toward a second step instead of a second factor, which is what you've seen. Once you've set up a device as a trusted one with 2FA for your Apple ID, that device is always available to authenticate any connection that needs it except logging back in to the iCloud control panel in OS X or Settings → iCloud in iOS.

Thus, when you log in to a website

in OS X that requires authentication from a trusted device, all your trusted devices—including the one on which you're browsing—wind up qualifying. Because someone needs physical possession of that trusted device, this doesn't eliminate every risk, but it does get rid of most of them. ■

Ask Mac 911

We're always looking for problems to solve! Email us at mac911@macworld.com including screen captures as appropriate.

Mac 911 can't provide direct email responses or answers for every question. For that, turn to AppleCare, an Apple Store Genius Bar, or the Apple Support Communities.